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CHRONICLE OF THE MUSEUM FOR THE ARTS OF DECORATION OF THE COOPER UNION

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1949–1958

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p. [134], caption of illustration, Figure 1:
for, "Purchased, Au Panier Fleuri Fund"
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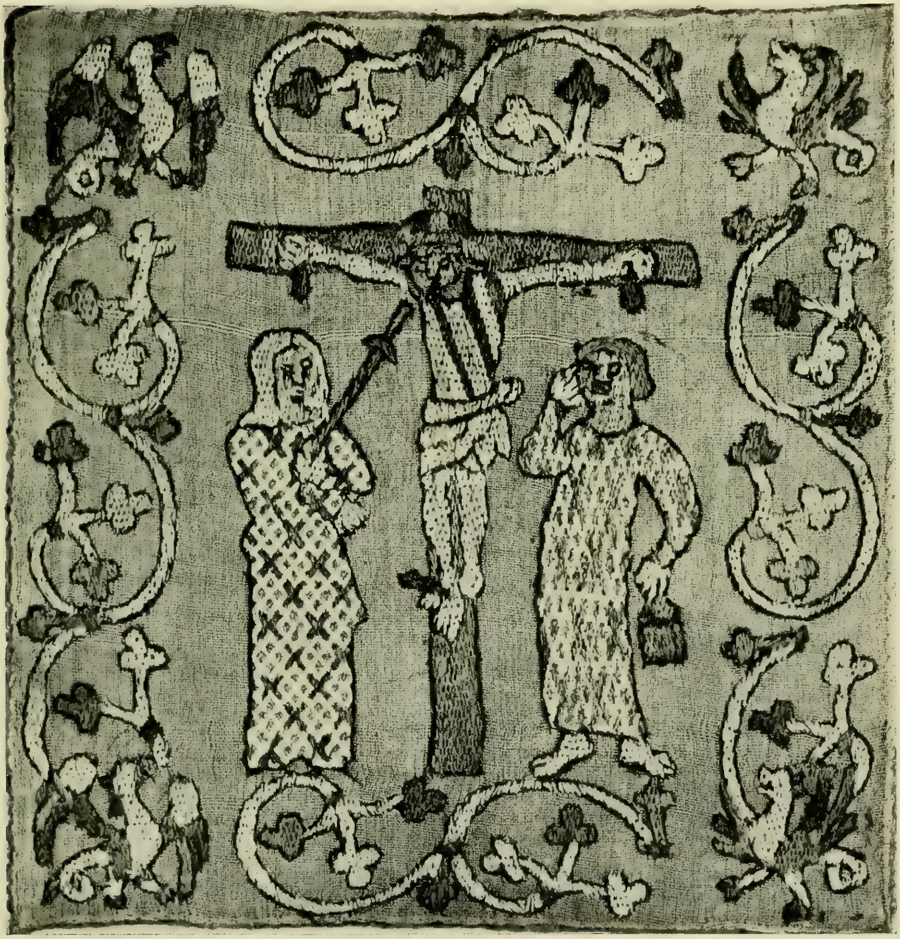

CHRIST ON THE CROSS
PANEL FROM AN EMBROIDERED ALTAR FRONTAL WORKED ON LINEN IN COLORED SILKS
GERMANY, LOWER SAXONY, FOURTEENTH CENTURY
Purchased in Memory of Elizabeth Haynes by her Friends

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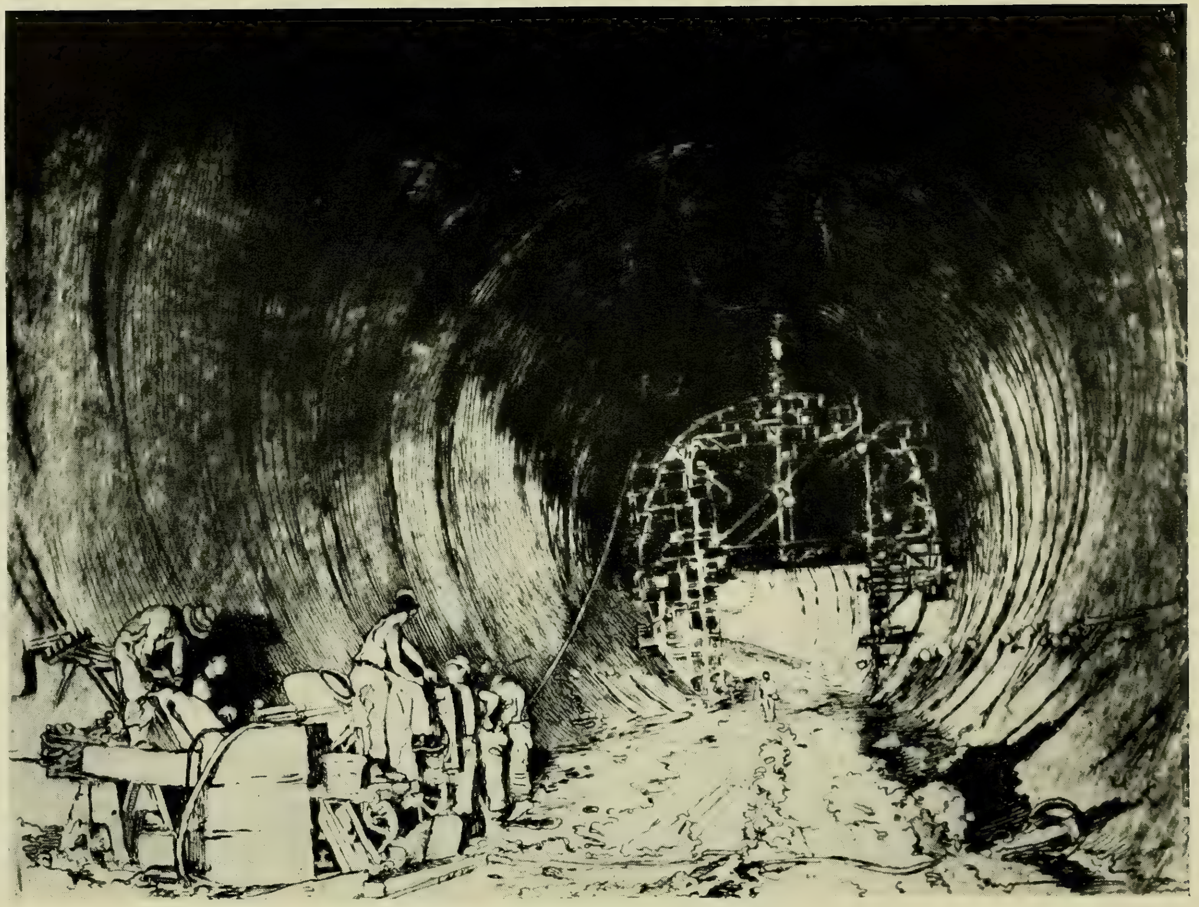
CHRONICLE OF THE MUSEUM FOR THE ARTS OF DECORATION OF THE COOPER UNION

VOL · 2 · NO · 1 OCTOBER · 1949

This issue of the Chronicle, the first to be published since December, 1945, begins the second volume. Within the small amount of space available in these occasional issues the Museum has managed to record its gratitude to those who have helped its development, through their gifts of money or of service, and through their generous enrichment of the collections. Previous issues of the *Chronicle* have also published articles on various aspects of the Museum's work that have not been generally known, and on certain of the Museum's holdings that have seemed worthy of mention.

The present issue continues in the way of its predecessors, reporting also, as they did, some of the changes in personnel that have occurred since the time of last publication. In the past three and one-half years there have been several changes in the composition of the Advisory Council. Mrs. Grafton H. Pyne served as Chairman from the time when Mr. Elisha Dyer resigned in October, 1946, because of absence from the country, until April, 1949, when Mr. Dyer was again appointed Chairman by the Trustees of The Cooper Union. Mrs. Werner Abegg, Secretary of the Advisory Council, resigned in July, 1946, being succeeded by Mr. John D. Gordan, who resigned in June 1948 and was followed in this office by Mrs. Neville J. Booker. Four members of the Advisory Council, Mrs. Werner Abegg, Mrs. Reginald P. Rose, Mr. John D. Gordan and Mr. Walter Knight Sturges, who had served terms of various lengths, resigned during this period, and one new member, Mrs. Charles H. Marshall, has been appointed.

In June, 1948, the Museum suffered sudden and great loss in the death of one of its senior staff members, Miss Elizabeth Haynes, who had joined the Museum staff in 1937. Her interests were many and keen, her work for the Museum of superlative quality; and she has been greatly missed by her colleagues in the Museum and her friends among the Museum's public. A gift to the Museum, in memory of Miss Haynes, is illustrated on the cover.



Hoover Dam Spillway
Etching; 1933; by J. S. Foster
Given by J. S. Foster

THE WONDER OF WORK

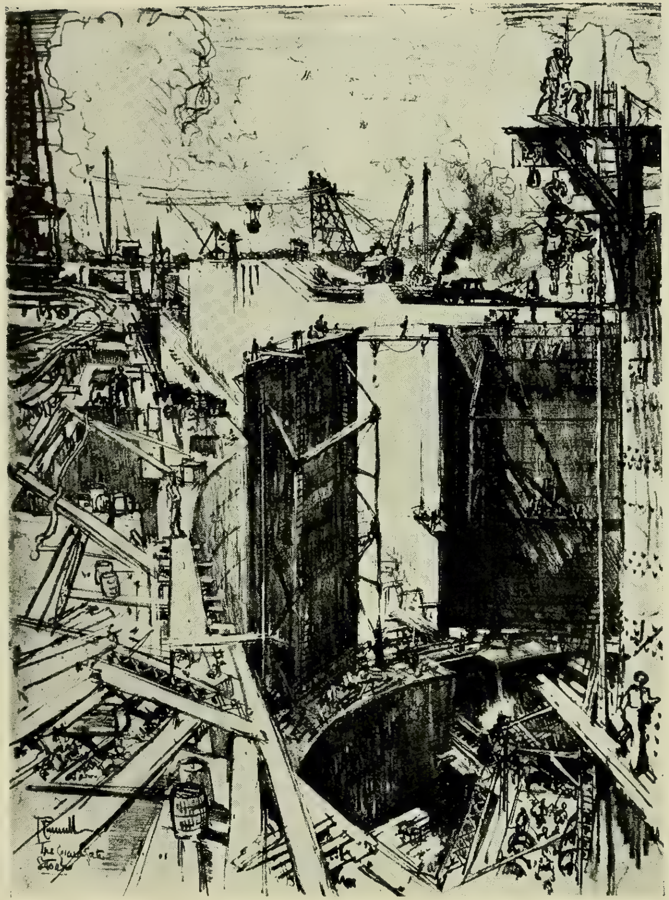
Corridors of engineering schools throughout America are customarily hung with bulletin boards, faded photographs of forgotten construction projects, or garish lithographs of modern engineering equipment. The alternative appears to be unadorned brick or plaster walls harmonized to the austere surroundings by such harsh shades of paint as may sometimes referred to as "elephant's breath." Therefore, it is really news if an engineering school hangs in its corridors and conference rooms a handsome set of Pennell lithographs of the construction of the Panama Canal and the works of such contemporary etchers as James E. Allen.

When *Civil Engineering,* the journal of the American Society of Civil Engineers, commented favorably on this innovation in its August 1948 issue, professional notice became nation-wide.

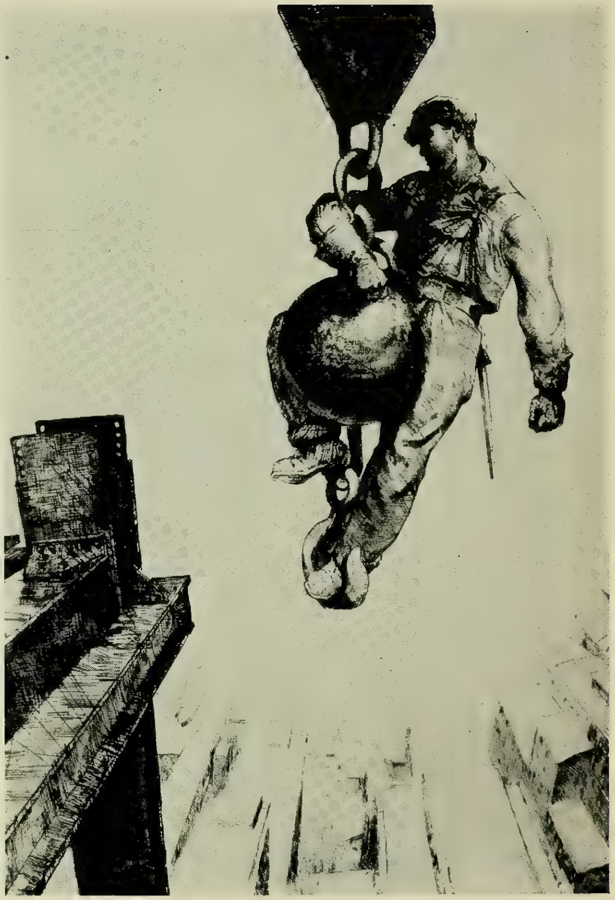
We are indebted to Mr. James Hazen Hyde for a liberal gift with which we acquired ten lithographs and two etchings by Pennell and four etchings by Allen. We feel that this collection quite aside from its artistic merit has a peculiar appeal to students of engineering. Pennell, who said that Whistler was the first to prove that chimneys are as fine as church towers, wrote, "I went to the Panama Canal because I believed that at the Canal I should see the Wonder of Work, the Picturesqueness of Labour, realized on the grandest scale."

The article in the Civil Engineering journal has brought many favorable comments to the institution and has even stimulated visits of engineers who shared his view. One reader, J. S. Foster, a construction engineer himself and an amateur etcher, was so interested in reading about our project that he made us a gift of three of his own etchings of the construction of the Hoover Dam.

The hanging of these prints, of course, is not an isolated effort on our part to develop in our engineering students an interest in the arts. Actually, the improvement of the corridors is only part of the academic setting against which intensive courses in the humanistic-social studies are carried on simultaneously with their science and engineering training. Our aim is twofold: to help the student achieve the social intelligence demanded increasingly of engineers; and to open cultural paths which may be pursued by the student later in life. Our School of Engineering accepts the responsibility for creating in our students fuller, richer personalities, so that they may contribute more to society than professional competence, and that they may enjoy for themselves a wider range of cultural experiences.



Guard Gate, Gatun Lock
Lithograph; Panama, 1912; by Joseph Pennell (1860-1926)
Given by James Hazen Hyde



The Sky Man
Etching; 1935; by James E. Allen
Given by James Hazen Hyde

The Museum has been a sympathetic participant in the educational program of our School of Engineering and Art School. Over the past ten years its staff has arranged special exhibitions, secured additional materials, through inter-museum loans, and encouraged browsing on the part of our undergraduates.

Our attempt to cultivate the student's historical imagination may be illustrated by the exhibition on "The China Trade and Its Influence on the Western Arts from 1700 to the Opening of the Suez Canal in 1869" which was arranged by the Museum in 1944 to supplement the studies in literature and history then being pursued by our engineering and art students. In the history classes, the students were giving seminar attention to the eighteenth-century novels. The Museum exhibition demonstrated among other things the impact of the development of fast-sailing vessels and later of steam on the opening of the Far East, showing the commercial, political, and artistic repercussions of these technological developments. The integration of the various studies through the Museum exhibition was a happy one for both instructors and students; moreover, the exhibition attracted very favorable comment in art and commercial circles.

We feel that the stimulating influence of the Museum can be gauged somewhat when a freshman engineering student returns shortly after a tour of the collections under the guidance of his instructor and asks the Keeper of Prints for information as to where to purchase etchings, prints, and lithographs because his parents have promised him a Christmas present of his own choosing.

Edwin S. Burdell

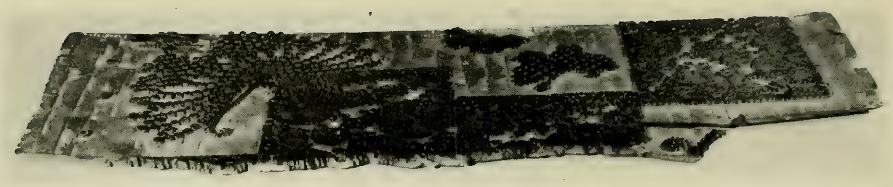


FIGURE 1. PRINTING BLOCK FOR TEXTILES; JAPAN, NINETEENTH CENTURY.

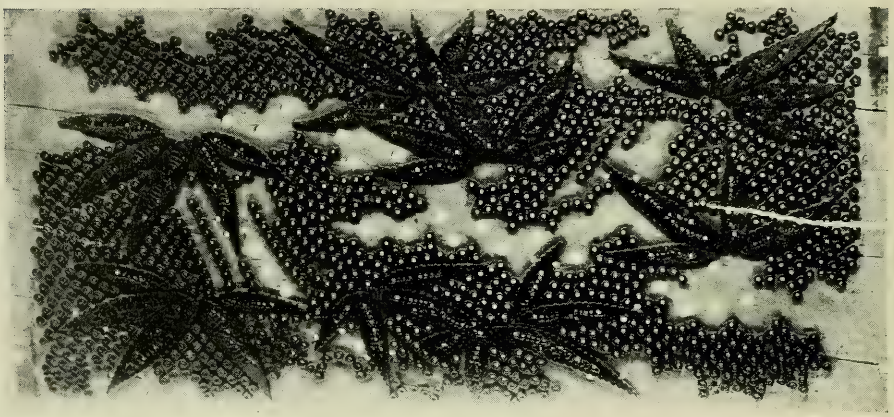


FIGURE 2. FACE OF PRINTING BLOCK FOR TEXTILES; JAPAN, NINETEENTH CENTURY.

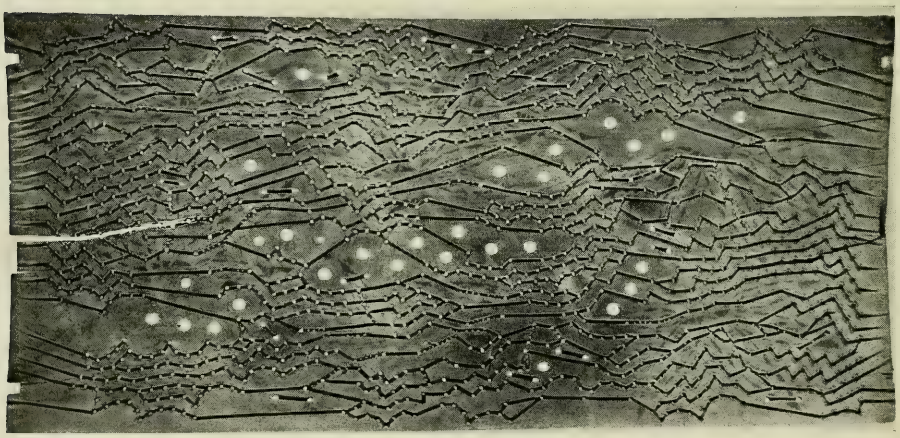


FIGURE 3. REVERSE OF PRINTING BLOCK ILLUSTRATED IN FIGURE 2, SHOWING FUNNEL-SHAPED HOLES.

Textile ornamentation may be divided into two main groups. In the first the design is actually woven into the cloth on the loom; in the second it is applied after the cloth has been woven. Besides the needle and the paint brush, man has invented many methods of achieving this surface textile decoration. The best known are block printing, printing from engraved metal plates and from engraved metal rollers.[1]

There are many ways in which the color can be applied to the fabric with the help of the block or the roller; those most often employed are the direct method, the discharge and the resist. In the direct style, as the name implies, the color is applied directly to the fabric by printing from the block, of which the design areas have been charged with color. Discharge printing consists of printing patterns on a solid-color piece-dyed ground, the chemicals used for the printing being able to remove the dyestuff in those places where a white design against a dark background is required. The principle of resist dyeing is the opposite of discharge printing: a resist is used for printing the design, instead of a color; the fabric is then put into a dye bath which leaves the resist-printed areas untouched by the coloring matter. Both batik[2] and tie-dyeing[3] belong to the resist type. But since this article deals only with block printing, it is unnecessary to go into further detail here about the various means of using resist.

The Cooper Union Museum recently acquired several Japanese printing blocks, a most valuable addition to the Museum's collection of textile-producing implements, and apparently unique in the museums of this country. They differ from blocks used in the western world, and have provided an interesting problem for study.

The art of dyeing and printing textiles by various means has long been known in Japan, where the Japanese, always interested in technical skills, have invented and experimented with many unusual methods. It reached its height in the Nara period (645-781), and a great part of the textile

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[1] Textile printing is really a form of dyeing, but differs in that the cloth instead of being uniformly colored throughout by immersion in a solution of the dyestuff, has one or more thickened colors or mordants applied to certain parts of the cloth, the color being developed by steaming or dyeing. The close relationship existing between the two is emphasized by the fact that although it is quite possible to print on cloth almost any pigment capable of being converted into viscous fluid, as for example paint, colored wax, and the like, yet generally speaking the coloring matters employed in the one process are identical with those employed in the other.

[2] Melted wax is used in this process to make the proposed design. The cloth is then dyed and the waxed areas will not take the dye.

[3] Waxed threads are used and tied around certain areas of the cloth, preventing the dye from reaching the tied parts.

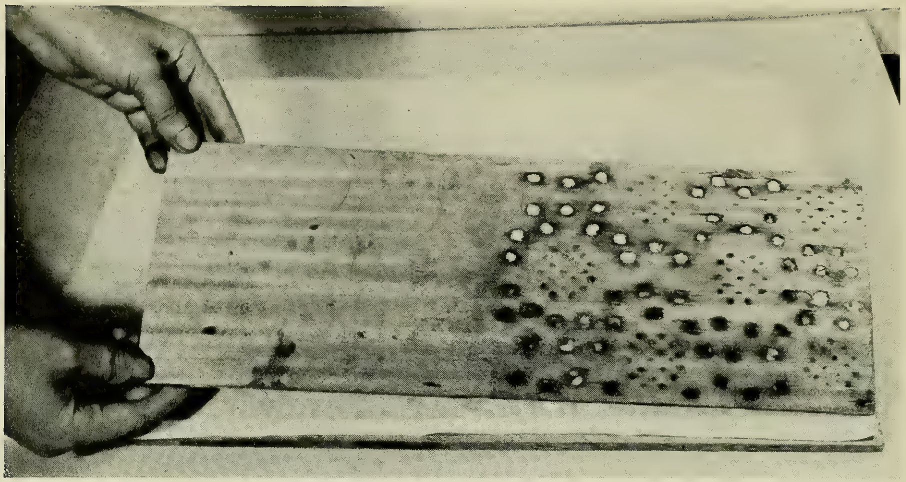

FIGURE 4. REVERSE OF FIGURE 5, SHOWING THE PLACING OF PRINTING BLOCK ON CLOTH, WHICH LIES ON THE SECOND BLOCK BELOW.

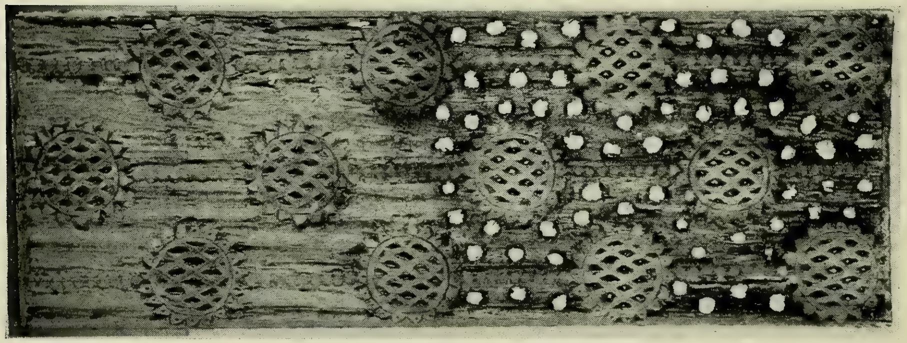

FIGURE 5. WOOD-BLOCK FOR TEXTILE PRINTING, MADE BY MRS. ANNA C. MAUTNER, AFTER A JAPANESE PRINTING BLOCK IN THE COOPER UNION MUSEUM.

remnants of that time are preserved in the Shōsō-in (the Imperial Treasure House at Nara). These specimens are from ceremonial robes, Buddhist banners and household furnishings. Besides the beauty of design and coloring which characterizes them, they display an extraordinary variety of dyeing and printing methods. There are *rōkechi* (batik), some of which are produced by tying and dyeing (*kōketsu* or *shibori*) and others by the wax and resist method (*rōketsu*); and there are *kyōkechi* (dyed with the silk clasped between two pattern-pierced boards). The more customary methods of printing, painting and stenciling are also represented; but the *kyōkechi* would appear most closely related to the Museum's newly-acquired blocks.

In western textile-printing of the present time the ordinary woodblock is composed of three thicknesses of wood glued together, the height varying from two and one-half to three inches. The design traced on the block is left in relief by cutting away to a considerable depth the surface of the block around the figure. The Japanese blocks or boards are cut in relief in the same way, but are only about one-eighth of an inch thick (Fig. 1); and are pierced with many small holes that run into depressed channels incised on the reverse.

The larger of the blocks illustrated (Fig. 2) has a plain and not unusual design consisting of long, narrow, scalloped leaves, with the background filled with numerous minute rings similar to those of a tied-and-dyed fabric. The smaller and more fragmentary block (Fig. 1) depicts a composition of squares formed by large and small circular floral motifs, with several butterflies, suggesting again the imitation of the tie-and-dye printing method. The carving seems to have been done by a skilled craftsman, though the designs themselves are rather conventional. Judging from the ornamentation, the blocks are not much earlier than the nineteenth century. The width of both blocks is eighteen and one-half inches, the width of cloth most commonly used in Japan for textile printing.

As already stated, the design on the usual Western woodblock is left in high relief by cutting away to a considerable depth the surface around the figures; the patterns in relief are then charged with color and the block applied with pressure to the cloth. The Japanese carver begins his work in a similar manner. A block of wood of the size necessary for the complete design is chosen and the pattern drawn or transferred onto its smooth and perfectly flat surface. The carver then cuts away deeply the ground around the pattern, keeping the edges of the part left in relief sharp and clean and leaving the depressed portions perfectly smooth. When all this has been done to his satisfaction, he then performs a further operation unknown to western practice. He bores holes from the depressed section through to the other side of the block, forming them into funnel-shaped openings from that side (Fig. 3); and, finally varnishing the whole block to resist the action of water, he gives the block over to the printer.

Except in the matter of the funnel-shaped holes the block is precisely similar to the ones used by the old calico-printers of the west; but, as will be observed now, the manner of manipulation is very different. Along with the carved block the printer receives from the carver another piece of wood of somewhat larger size, perfectly flat and smoothly planed on one face. The printer takes a piece of cloth and stretches it tightly on the smooth surface of the plain block, places the figured block face down (Fig. 4) and clamps the two pieces of wood together tightly so as to imbed the raised

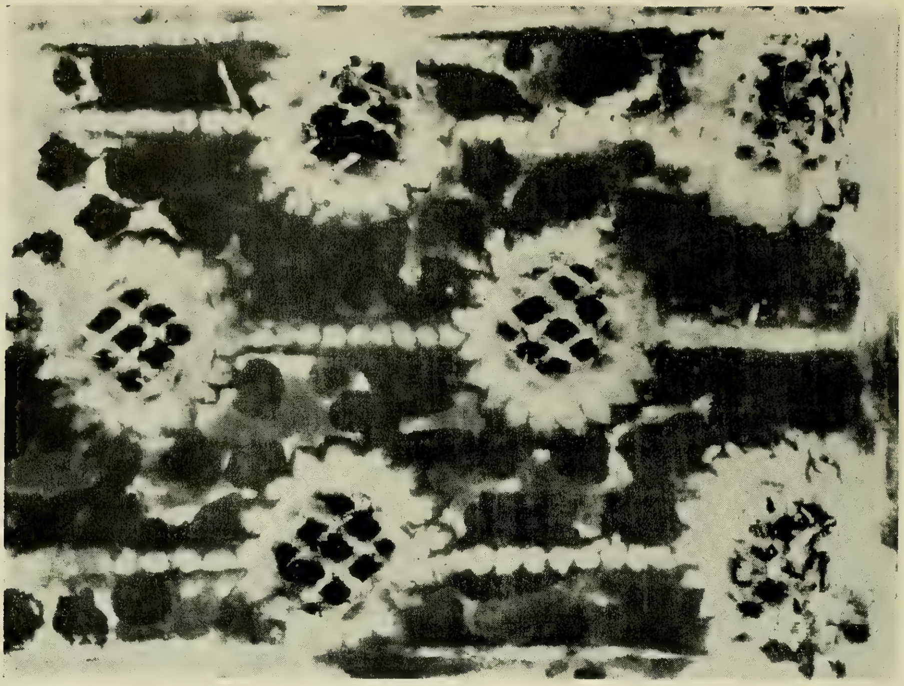

FIGURE 6. SAMPLE MADE IN THE COOPER UNION MUSEUM FROM WOOD-BLOCK ILLUSTRATED IN FIGURE 5.

design well into the cloth. The dyestuff is then applied through the holes until all the depressions are filled. The dye or stain immediately saturates the exposed portions of the cloth but does not touch the parts which are tightly squeezed between the raised design and the flat surface of the plain block underneath. After sufficient drainage has taken place the blocks are disconnected and the fabric removed to be dried and fixed. In some cases the block can also be used for the positive process, the relief portions being charged with color and pressed against the cloth in the same manner as textile printing is usually done. In other words, the Japanese printer can get two different effects with the same block: his blocks can produce a white pattern on a colored ground or a colored design on a white ground.

It is difficult to believe, on first thought, that the pressure could have been sufficient to prevent the running of the dye under the raised areas of the block. If, for instance, a very thick coloring matter was used by the Japanese printer it would have been practically impossible to pour such a compound through the holes, whereas any liquid dye would have penetrated into the fibre and spread within the cloth no matter how tightly the fabric was clamped between the boards. Experiments with a block cut in the same manner as the newly-acquired boards were therefore undertaken to determine how textiles were actually printed with such boards.

Profiting by the generous cooperation of Mrs. Anna C. Mautner, who has had extensive experience in the practice of old techniques of textile-printing, such experiments were conducted at the Museum. A new block was made (Fig. 4, 5), and when its raised portions had been treated with a resist it was put face down on the cloth to be printed, which was stretched on a board exactly as in the Japanese method. Then the dyestuff was poured through the holes with a dropper. All the raised areas which were covered with the resist remained white and the depressed parts were filled with the dye. The result (Fig. 6), while lacking the sharp outlines of a Japanese printed textile, suggests that the experimentation had in fact followed the procedure for which the Museum's textile-printing blocks were designed.

One may well wonder why the Japanese should have developed such an indirect means of resist dyeing, even though the use of such boards as these would yield a clearly defined pattern on both sides of the textile, which is not the case in ordinary printing processes. It seems safe to assume that the boards now in the Museum's collection represent a relatively unusual and almost experimental undertaking by one of a small number of textile printers of a century ago, perhaps in emulation of the Japanese printers of a far earlier time.

LILI BLUMENAU

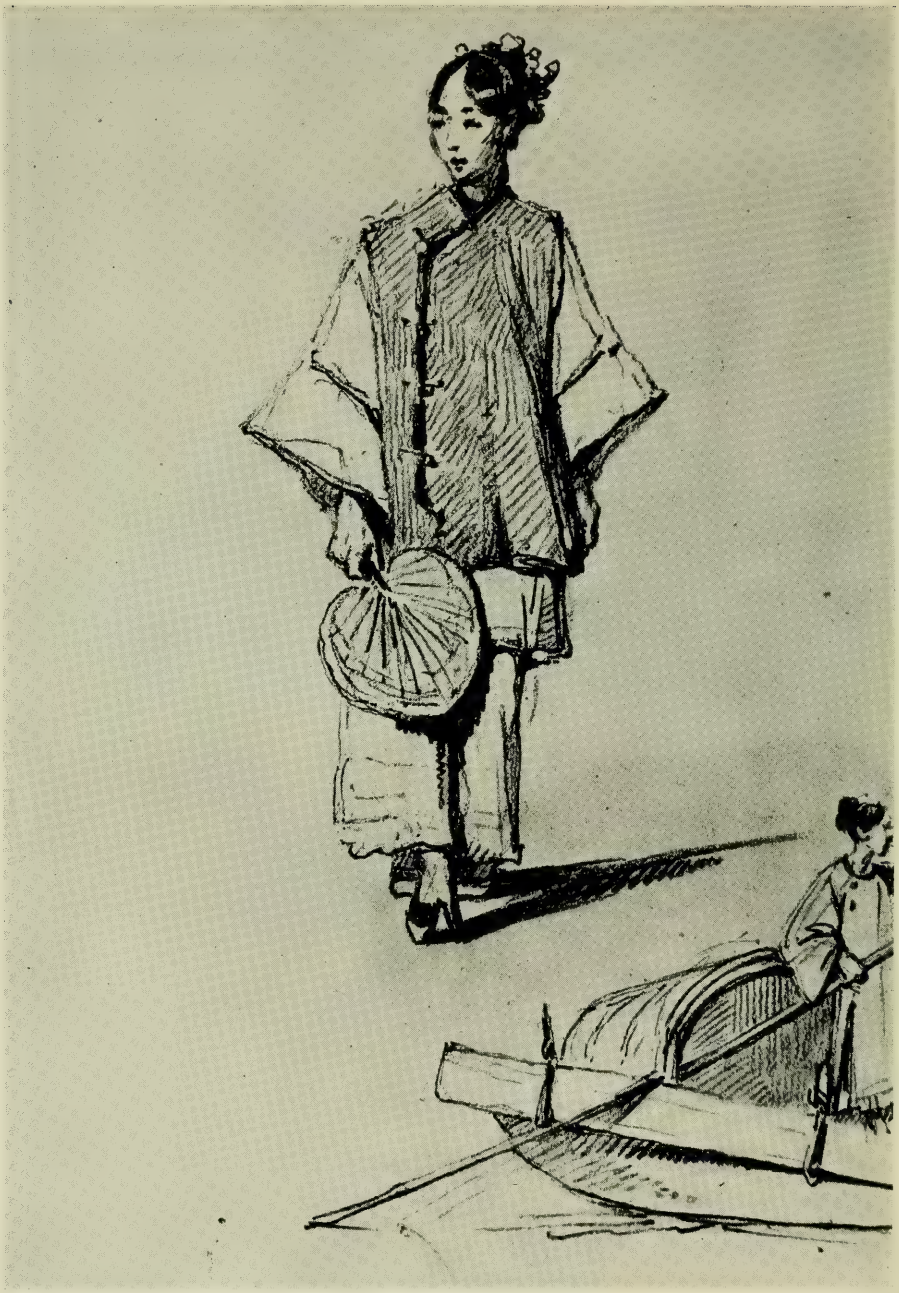

FIGURE 1. DRAWING BY CHINNERY OF A CHINESE LADY, AND BELOW, A SAMPAN GIRL.

AN ALBUM OF CHINNERY DRAWINGS

THE MUSEUM recently received as a gift[1] an album of drawings by George Chinnery. This gift is especially important because until now the Cooper Union collection has had no examples of the work of Chinnery or any of his circle.

Chinnery interests us because he was the artist who transferred to canvas the American and Chinese merchants who were carrying on the China trade in the first half of the nineteenth century. He gave us, besides, charming and intimate representations of the ordinary life of the Chinese, which had received little attention from the Europeans who had been trying since the sixteenth century to open China to the West. The publications of the earlier Jesuit missionaries and of the successive embassies seeking trade concessions were alike concerned primarily with the life and customs of the courtly and official classes in China, although both Montanus[2] and Nieuhof[3] included several plates of working people. In Ogilby's English translation of Nieuhof appear, for example, illustrations of such working people as "A Woman of Northern Tartary" and "A Rustick sowing," while Montanus gives an illustration of a "Gardener."

The few publications in the eighteenth century on China and the East, both in text and illustrations, dealt with the Emperor and his court. Among these are the engravings by various Frenchmen reworked by Cochin.[4] These plates are on a grand scale and depict the various battles of the Emperor of China, at whose command the plates were in fact published. Then there are the two sets of plates engraved by Helman[5] giving more intimate close-ups of court life. Not until about 1800 do we find books with illustrations devoted to the life and occupations of the lower and middle-class Chinese.

The newly-acquired album covers the very early period of Chinnery's life in China, and is a brilliant example of work done under the first impact of a fresh and stimulating experience. It is bound in a beautiful nineteenth-century Chinese brocade, geometric in design and variegated in color. The

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[1] Given by James Hazen Hyde; Museum accession numbers, 1947-117-1 to -11.

[2] Montanus, Arnoldus. *Atlas Chinensis . . . English'd . . . by John Ogilby.* London, 1671.

[3] Nieuhof, Jan. *An Embassy from the East-India Company of the United Provinces to the Grand Tartar Cham Emperour of China . . . with an appendix of several remarks taken out of Father A. Kircher; English'd . . . by John Ogilby. London, 1669.*

[4] *Victoires et conquêtes de l'empereur de la Chine, représentées en 16 pl. grav. à Paris, de 1678-74, sous la direction de Cochin . . . d'après les dessins exécutés à Pékin, par ordre de l'empereur Kien-Long.*

[5] Helman, Isidore Stanislas. *Faits mémorables des empereurs de la Chine, tirés des annales chinoises.* Paris, 1788.

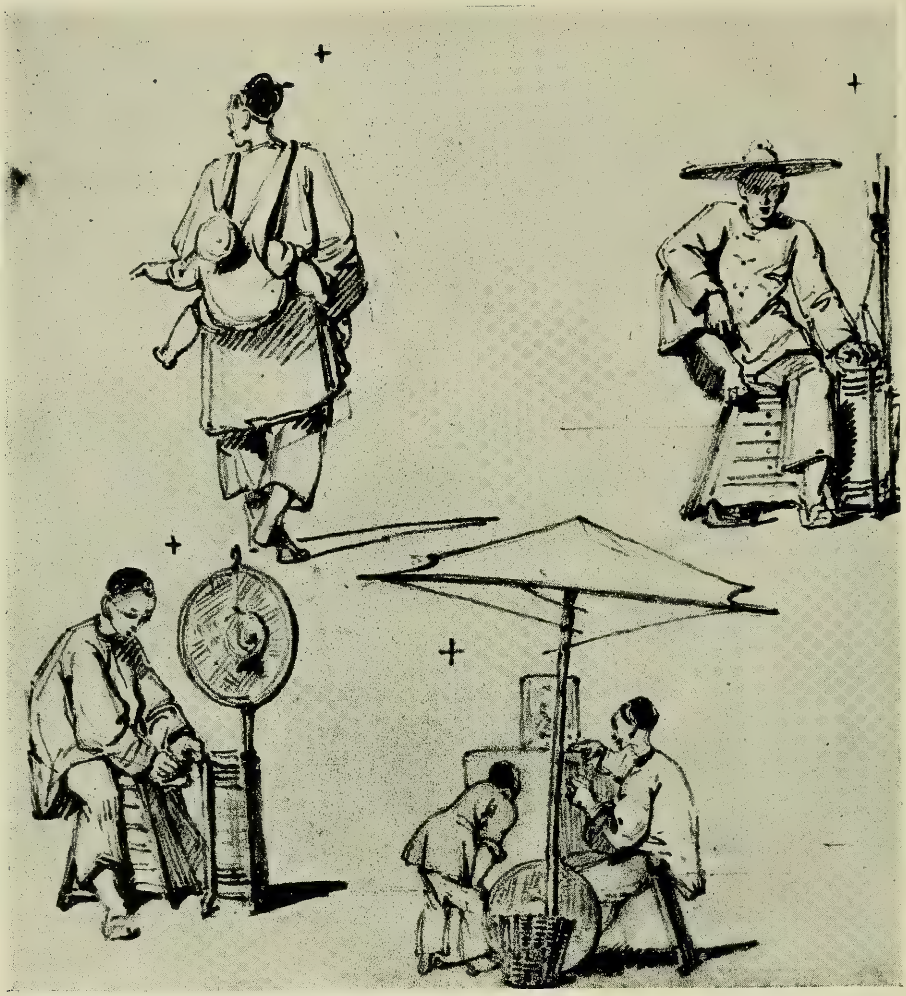

FIGURE 2. PAGE OF SKETCHES BY CHINNERY SHOWING THE CHINESE BARBER AND THE RAREE-SHOWMAN WITH HIS PEEP-SHOW.

title-page is drawn in pencil on a leaf of the album itself. The drawings, however, are on separate sheets of Whatman paper, watermarked 1821, mounted in the album and framed with bright blue bands of Chinese satin. These drawings are dated 1826, the year after Chinnery arrived in China. Similar in technique, subject-matter and inscriptions to other accepted Chinnery drawings, they antedate by two years the large collection now in the Peabody Museum in Salem. Our album has come to us with no particulars as to its earlier history.

Our drawings include two scenes of Macao, one showing the Franciscan Monastery and the other, the Collegiate Church of St. Paul. Another drawing is a charming portrait of a Chinese lady with her fan and her little bound feet. (Fig. 1). In the corner is a Chinese girl poling her sampan. These sampans (the word means "three planks" in Chinese), were the only method of coming inshore from larger ships at anchor. Another sketch shows a Hong merchant carrying a fan in one hand and holding his hookah in the other, and is inscribed "Canton 1826." There are a number of sketches of a Chinese barber at work. In one he is hurrying up the street, on his shoulders a pole from which hang his barber's bench and hot-water equipment. Another sketch shows the barber shaving a somewhat apprehensive-looking customer. In a third drawing he is braiding the customer's pigtail; again, with a caption in obsolete shorthand, he is seen squatting on the barber's bench, patiently awaiting the next customer.

In the second quarter of the nineteenth century, there was a tremendous interest in the life and customs of the lower and middle-class Chinese. Travellers to this exotic country kept diaries and wrote voluminous letters home. Among these, the Rev. G. N. Wright[6] wrote a book that was published in London in 1843. He devotes a whole page to the Chinese barber and explains the importance of this individual in the life of a Chinaman. Every Chinaman must be clean-shaven until he is forty. As Wright described it: "No Beards being allowed to grow, no moustache permitted to remain . . . , nor a single hair suffered to wander over any part of the face, the attendance of a barber is lastingly requisite." Consequently, Wright reports: "In Canton, alone, upwards of 7,000 barbers are constantly perambulating the public streets, indicating their *locus* and their leisure by twanging a pair of long iron tweezers."[7]

At the bottom of the sheet of sketches showing barbers is a delightful street-corner scene. The Chinese raree-showman has set up his peep-show box under an improvised umbrella, and a half-grown boy has his eyes glued

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[6] Wright, George Newnham. *China; in a series of views, drawn from original and authentic sketches by Thomas Allom, Esq., with historical and descriptive notices by the Rev. G. N. Wright, M.A.* London, 1843.

[7] *Ibid.,* vol. III, p. 52.

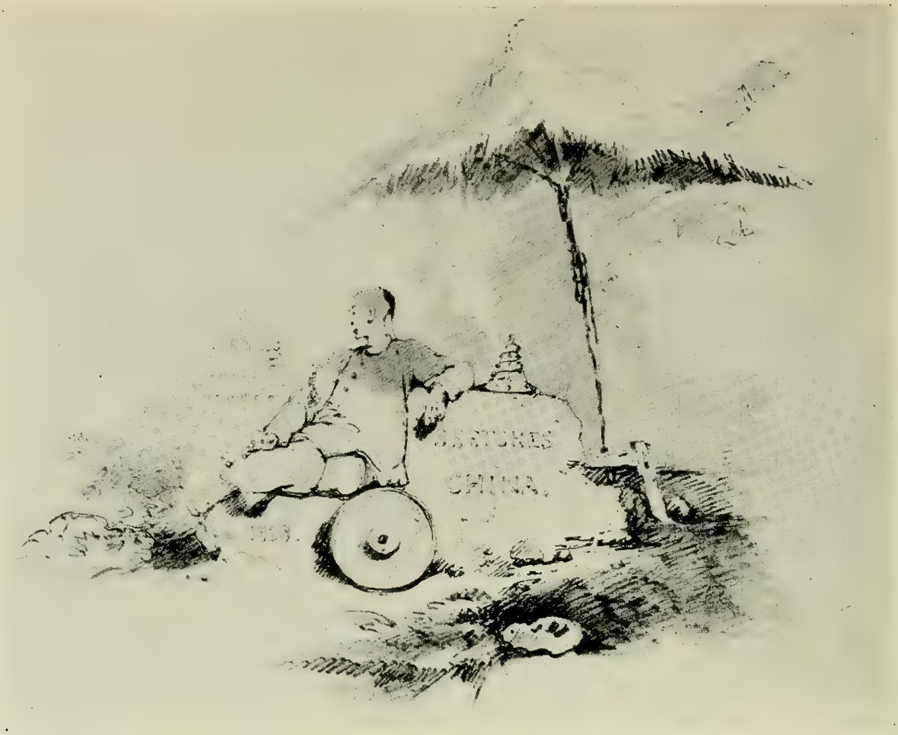
SKETCHES
CHINA

FIGURE 3. TITLE-PAGE DRAWING FOR THE COOPER UNION MUSEUM SKETCH BOOK. COMPARE SHADING AND LETTERING WITH THOSE IN FIGURE 4.

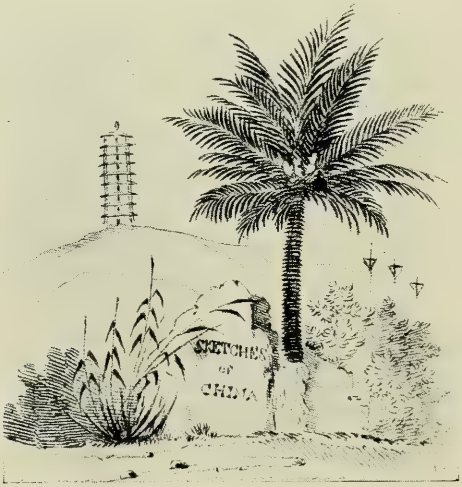
SKETCHES
OF
CHINA

FIGURE 4. FRONTISPIECE OF *Sketches of China* BY W. W. WOOD. LITHOGRAPH AFTER A DRAWING BY W. W. WOOD.

to the peep holes. This amusement was to the poorer classes in the Orient what the street theatre was to the Italians and the Punch and Judy show to the French (Fig. 2).

The Museum's drawings and other intimate domestic scenes are typical of the sketches made by Chinnery in the black crayon to which his friends always referred as "positive black butter," many of which were done to be sent to America along with the portraits in oil which the merchants in Macao had had painted for their devoted families at home. Chinnery spent twenty-five years in China, after a somewhat unsettled career in other parts of the East. He was born in London, and exhibited portraits at the Royal Academy when only seventeen. In 1795, at the age of twenty-one, he went to Dublin where in 1799 he married his landlady's daughter. In 1802 he left his family and went to India, living successively in Madras, Bengal and Calcutta. In 1825 he again fled from his nagging wife and creditors to China, and took up his residence in the Portuguese settlement of Macao. Here he remained until his death in 1852.

Much of our information about Chinnery and life in Macao comes from the diary of Harriet Low.[8] This Salem girl had gone out to China with her aunt and her uncle, head of the Canton office of Russell & Co. They left Brooklyn in May and arrived in Macao September 30, 1829. She was a charming American girl, twenty years old, the only unmarried woman in the small Anglo-American colony. She had many beaux, and an interest in drawing unsupported by any great talent. She took drawing lessons from Chinnery and her diary gives this account of him: "This morning called on Caroline, and then went to that amusing man, Chinnery, and stayed until after two sketching. There is a good deal to be gathered from his conversation, and some of his similes are most amusing. He has been a great observer of human nature, for which he has had every opportunity, his profession having brought him in contact with people of high and low degree. . . . He has excellent sense, and plumes himself upon being 'though not handsome, excessively genteel;' his personal appearance, I think, however, is rather against him, for he is what I call fascinatingly ugly, and what with a habit he has of distorting his features in a most un-Christian manner, and with taking snuff, smoking, and snorting, I think, were he not so agreeable, he would be intolerable. But, to give him his due, he is really polite, and speaks well of everyone. Being one of his special favorites, I must say something for him; to use his own expression, he 'buckles' to me."[9]

Life in Macao went on as usual with its parties and its afternoon calls, and Harriet Low faithfully records them all. But about two years after her arrival in China, this paragraph appears in her diary: "Nothing particular has happened, except that I have been introduced to another American gentleman, who came out in the 'Fanny' from Philadelphia, a very clever and pleasing young man. He was introduced by Mr. B.[10] on Sunday morning, being too diffident, he says, to come alone. He managed, however, after the first time to come again to walk with us, and to stay to tea. He is an immense talker, but always talks well — wise, witty or grave as suits his hearers. He is not handsome but has a most intellectual face. He draws very well, and immediately took me under his protection and became my teacher."[11]

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[8] Hillard, Katherine. *My Mother's Journal, a young lady's diary of five years spent in Manila, Macao, and the Cape of Good Hope,* from 1829-1834, edited by Katherine Hillard. Boston, 1900.
[9] *Ibid.*, p. 193.

Some time later this entry appears in the diary: "This morning I studied a little, then went to Chinnery's room. There is a great attraction there now, a picture of my friend, which I was strongly tempted to pocket. It is a perfect likeness. I shall probably never see it again, as it is going to America. Well, I do not know why I should wish to, he is nothing to me."[12]

This friend, referred to throughout the diary as Mr. W., was indeed something to her. There are long and mysterious references to him and to the letters she wrote and received, and several months later she writes: "Went to Chinnery's with Uncle, as he was to have his last sitting. Drew a little, but I do not take the same interest in the amusement as I did last year, the change of masters makes a great difference, I find."[13]

The drawings mounted in the recently acquired album are unquestionably the work of Chinnery. The title-page drawing (Fig. 3), however, is by a different hand. It seems safe to assume, from the fact that the album was prepared in China, that the drawing was probably the work of someone who was in Macao during the period of Chinnery's residence there. But who could the artist have been?

Harriet Low assuredly could not have drawn the title-page. Despite her drawing lessons and her assiduity in copying Chinnery's sketches, this page is far more competently executed than are her drawings now in the Peabody Museum in Salem, or the sketches on the margins of her diary.[14] The enormous collection of Chinese views formed by Sir C. P. Chater[15] shows nothing that relates to the drawing in question. But a book by William Wood[16] published in 1830 in Philadelphia solves the problem. It has lithographed title-page (Fig. 4) and illustrations and bears a similar title, *Sketches of China.* The Museum's drawing and this lithographed title-page present conclusive similarities in style of lettering as well as in composition and in crayon technique.

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[10] *I.e.,* Mr. Blight.

[11] Hillard, p. 87.

[12] *Ibid.,* p. 166.

[13] *Ibid.,* p. 203.

[14] MS. in the Library of Congress, Washington, D. C.

[15] Orange, James. *The Chater Collection, Pictures relating to China, Hongkong, Macao, 1665-1860; with Historical and Descriptive Letterpress by James Orange.* London, 1924. (Sir Catchick Paul Chater, Kt., C.M.G., etc. [1846-1926], was a member of the Executive Council of Hong Kong.)

[16] Wood, William W. *Sketches of China: with illustrations from original drawings by W. W. Wood.* Philadelphia, 1830. This book was brought to my attention by Dr. Arthur Hummel, Chief of the Asiatic Division of the Library of Congress.

In his introduction Mr. Wood modestly says: "The illustrations are from original sketches from my own pencil, and have nothing but their fidelity to recommend them."[17] "A residence of more than common leisure in China, enabled me to devote much time to the collection of notes and memoranda, which I now present to the curious nearly in their original form, written at the moment of the occurrences which they describe."[18]

Mr. Wood was none other than Harriet Low's friend, "Mr. W.," who seems not to have been mentioned by name until after his book had reached Macao. By July she had read it and is quoting it to her family in her journal.

"We had a most delightful party of about a dozen. . . . We anchored for tea, and with a delightful breeze reached Macao about 1 A.M. . . . By the bye, we came on shore in a sampan rowed by two Chinese girls. As Wood says in his *Sketches of China,* 'These boats are manned by a brace of Chinese ladies.' "[19] Carrying on Wood's remark, of which the journal gives only this brief excerpt, we quote in turn: ". . . a brace of Chinese ladies, who are quite dexterous in managing them. In addition to a fee of a dollar to these sun-burnt viragos, for rowing you perhaps 20 yards, a further extortion of a dollar as a landing fee is suffered from the Mandarins."[20]

The affair between Harriet Low and Mr. Wood, which seemed so promising, evidently did not meet with her family's approval. By the time she describes the end in her journal she has reconciled herself to it and her attitude toward him is quite harsh; "Uncle came home about five o'clock this morning. Brought me a long letter from my friend in Canton, humbly apologizing for all that has passed, expressing his regret, and lamenting the dreary prospect before him, etc. Having lost the powerful motive that has hitherto actuated him, he dares not hope that any of his good resolutions may be kept, — a whole sheet full of this, but I dare say 'it is all in my eye' as the boys say. I feel my heart grows harder every day, my dear, and I am perfectly astonished when I think how differently I view all that has passed from what I did a few months since, and wonder what has produced this change."[21]

James Orange, who collected and studied Chinnery and his contemporaries, and who prepared the catalogue of the Chater collection[22], apparently never identified Wood. Perhaps he had never run across this little American book, because he wrote in *The Studio* in 1927: "Among the drawings in the possession of the writer are several vignette compositions, evidently done with the idea of being reproduced in book or pamphlet form, but only some sheets of very feebly executed lithographs have been noted. The writer would be glad to know if any lithograph books of drawings by Chinnery were ever published."[23] The answer to the late Mr. Orange's question is undoubtedly *Sketches of China* by W. W. Wood.

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[17] *Ibid.,* p. xii.

[18] *Ibid.,* p. ix.

[19] Hillard, p. 101.

[20] Wood, p. 6.

[21] Hillard, p. 217.

[22] See n. 15.

The Cooper Union Museum is very fortunate in owning this album of drawings which ties together two of that small and intimate group of Americans which revolved about the charming and talented Chinnery. Out of it came two books, one by Wood describing the life and times in general; and the chatty and very personal diary of the young lady from puritanical Salem, who was so shocked at people making calls on Sunday that she religiously read one of the Buckminster[24] sermons each Sunday morning to counteract this wicked influence. It would be nice to believe that our scrapbook was made up by Wood and Chinnery and given them as a parting gift to the young lady from Salem.

EDNA B. DONNELL

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[23] Orange, James. *George Chinnery: Pictures of Macao and Canton.* In *The Studio,* London, 1927, vol. XLIV, p. 239.

[24] Buckminster, Joseph Stephens (1784-1812), Unitarian clergyman. His collected sermons were published in 1814.

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EIGHTH-NINTH STREET CROSSTOWN BUS	Route 13

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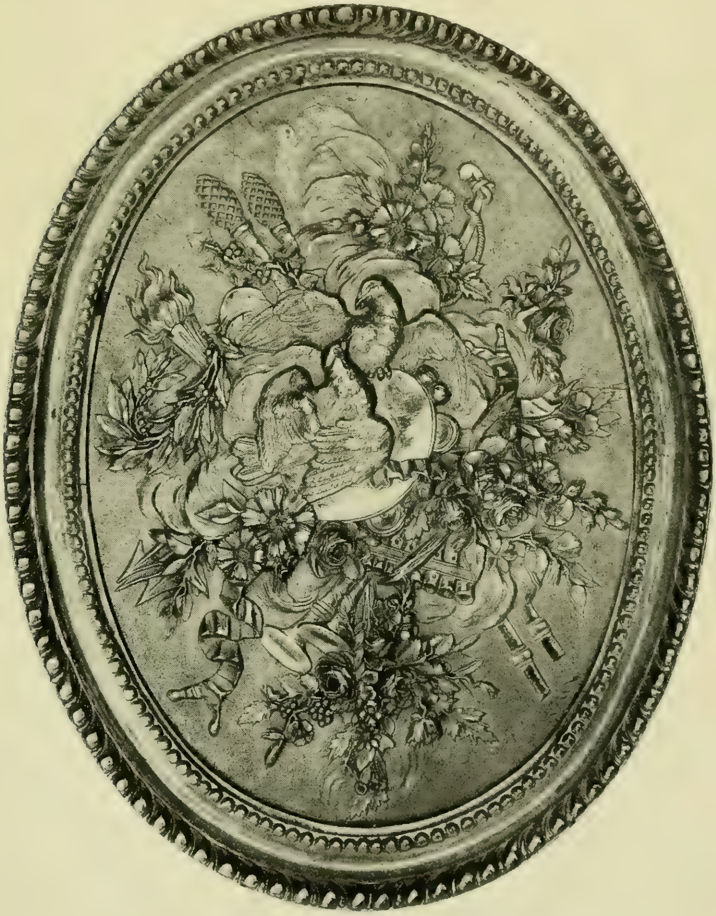
CHRONICLE OF THE MUSEUM FOR THE ARTS OF DECORATION OF THE COOPER UNION



LARGE GILT BRONZE MEDALLION INTENDED FOR THE FRONT OF A CABINET. ABOUT 1785.

VOL · 2 · NO · 2 JUNE · 1950

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CHRONICLE OF THE MUSEUM FOR THE ARTS OF DECORATION OF THE COOPER UNION

VOL · 2 · NO · 2 JUNE · 1950

In this issue of the *Chronicle* is published an account of one more portion of the Museum's collections: the rich assembly of gilt bronze mounts for furniture and for architectural elements that was acquired forty years ago. The direct applicability of this material to the decorative needs of the present moment may not be as great as it was at the time the collection was formed by M. Léon Decloux, of Sèvres; but these small objects none the less offer a contribution to the study of design and craftsmanship that cannot be ignored. It may be hoped that the article in the following pages will serve as an effective reminder of the value of this remarkable accomplishment of skilled metal-workers.

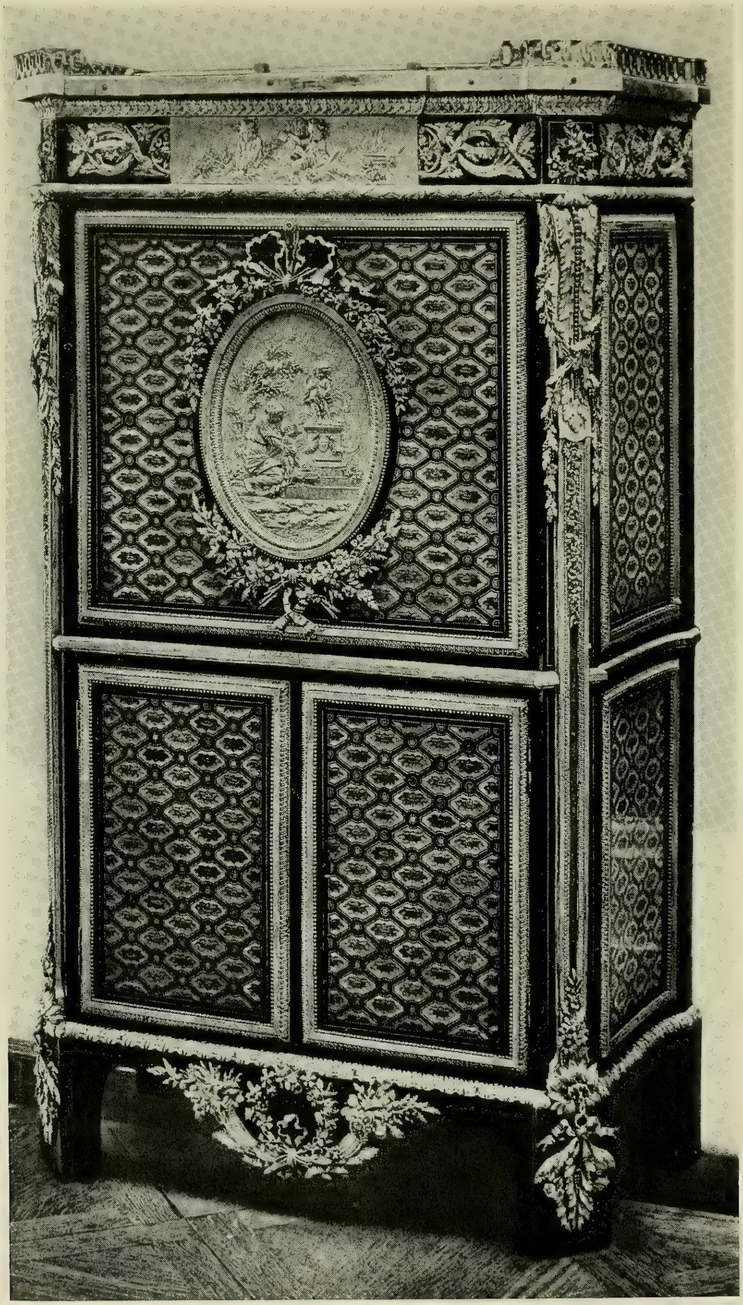

FIGURE 1. *Sécrétaire* BY RIESENER, WITH MOUNTS PROBABLY BY THOMIRE, IN THE WALLACE COLLECTION AT HERTFORD HOUSE, LONDON. ILLUSTRATED FROM *The Wallace Collection,* VOLUME II.

SOME GILT BRONZE FURNITURE MOUNTS IN THE COOPER UNION MUSEUM

Though style changes, and fashion demands a new face for its furniture, the function of furniture pieces themselves remains fairly constant; and those individual elements which assist and simplify this function, even while moving with style, never lose their essential identities because furniture really could not exist without them. Even today when contemporary furniture proclaims itself refined to the very *id,* its subconscious musings on the primary truths of its refinement are occasionally disturbed by the creak of a hinge or the rattle of a knob, voices of a dark ancestry it can never quite escape.

There are a number of reasons for supplying furniture with metal mounts of various sorts. Any piece that boasts doors or a lid must surely be fitted with hinges and a lock at least. Drawers must bear pulls so that they may be drawn out easily. It is often found advisable to add metal corners, feet, or mouldings to a piece in order that these portions of its anatomy so fitted may be protected from wear. Occasionally metal mounts may form a vital part of the actual construction of a cabinet or table; stretchers, corner braces, and the like fall under this heading. And then mounts may successfully be used purely for the purposes of decorative embellishment.

Even the earliest, crudest pieces of furniture are found to be fitted with metal elements. The simplest chest of the thirteenth century has a set of hinges of some sort, and often a hasp and a staple plate. More elaborate mediaeval chests and cupboards are strengthened by a binding of iron straps which incorporate hinges. Late thirteenth-century pieces bore at times the most elaborate wrought iron scroll work, a large part of whose purpose would appear to be purely decorative.

Chests were made portable by the addition of rings and end handles by which they could easily be moved about. Style varies greatly in the fifteenth, sixteenth and seventeenth centuries; some pieces have very little visible hardware at all. But in England, in Spain, and elsewhere, remarkably decorative hinges, lock-plates, studs, and applied ornament were used to very great decorative advantage. The unusually intricate fittings of the Spanish vargueño and the involved harpsichord hinge of the latter half of the seventeenth century are cited merely as isolated examples. The nature of furniture mounts underwent considerable change late in the seventeenth and early in the eighteenth centuries. Drop handles came into extended vogue; finely-wrought keyhole plates were furnished with locks.

An extremely important development occurred early in the eighteenth century; this was the appearance of the loop handle in which the pins running through the drawer front and often through a finger plate received the ends of the loop or bail. These were, of course, subject to continuing elaboration and development and many forms were devised which were peculiar to their unique purposes and their regional and period styles.

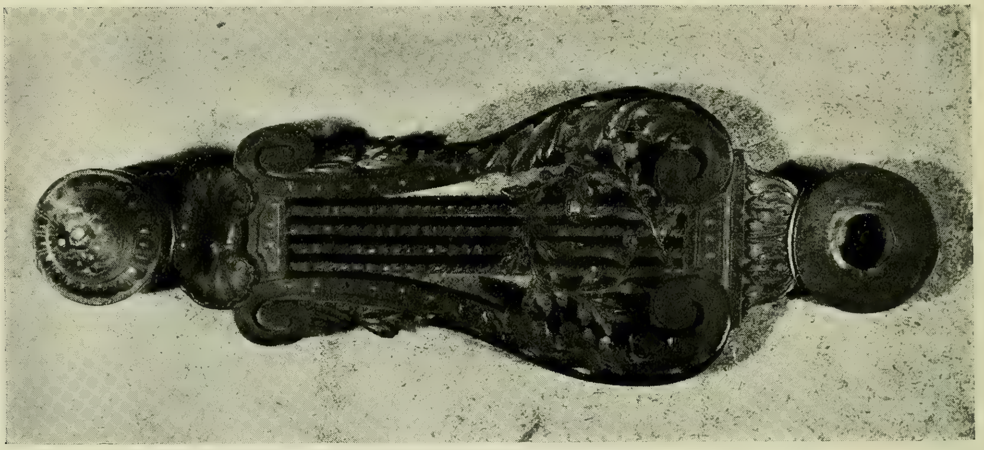

FIGURE 2. WOOD MODEL FOR THE HANDLE OF A LOCKING BAR. ABOUT 1780.

In no place did decorative mounts achieve such singular beauty and importance as in eighteenth-century France. The quality of design, of execution, and of application noted in French examples is without equal. Thomas Sheraton remarked that the French "excel us, and by this they set off cabinet work, without which it would not bear a comparison with ours."[1] Though a few may quarrel with the latter part of this assertion, no one would deny the truth of the first. English mounts were almost invariably of inferior workmanship, and even those designed by Robert Adam for use at Harewood are certainly not distinguished by their execution. Yet England may well have a place even in an account of French fittings, especially those of the late eighteenth and early nineteenth centuries, for contemporary pattern books indicate that some part of the metal work appearing on French pieces was at least cast in England and sent then to France for the high finish demanded there. And before this, sometime after 1759, Matthew Boulton counted among his wide activities in the metal trades in Soho the production of furniture mounts.[2]

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[1] Quoted in Jourdain, M.; *English decoration and furniture of the later XVIIIth century,* p. 251.

With the excellence of French work before us, it is not surprising that we associate the name of André Charles Boulle (1642-1732) with the appearance of a fully-developed and remarkably achieved style of embellishment. As *ébéniste,* or cabinet-maker, to Louis XIV, he had certainly every available facility at his command. But it was his own imaginative genius which produced the astonishing series of achievements in decorative treatment which his name alone symbolizes for us today. Those parts of his works which are in gilt bronze, while perhaps lacking the fineness of finish seemingly peculiar to decades later in the century, have a broadness and firmness of design, a dash of execution that impel admiration and even wonder.

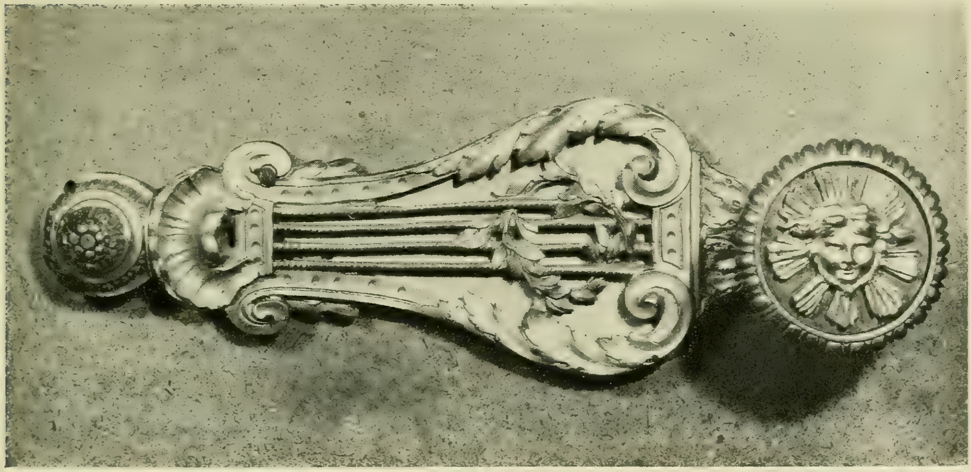

FIGURE 3. GILT BRONZE HANDLE OF A LOCKING BAR. ABOUT 1780. COMPARE WITH FIGURE 2.

Boulle foreshadows that period which will be of special interest to us. Even he was dependent to a considerable extent on metal working which had preceded him. But it would be an unfortunate error indeed to think, not only of Boulle but of the masters to come later, that their labors in the embellishment of furniture with metal mounts are the outcome solely of a continuing tradition in the mounting of furniture with metal. Painted and

[2] It is an interesting note that Abram S. Hewitt's father, John Hewitt, came to America in 1796 direct from Boulton's Soho works, where training in draughting and machine design had been added to his previously acquired skill as apprentice cabinet-maker.

carved ornament from preceding centuries contributed a great deal. And of course the draftsman of almost every period and in every medium took inspiration from ornament evolving originally from the antique.

The Cooper Union Museum is fortunate in possessing an extensive collection of these metal mounts for furniture pieces. Most notable among the large numbers of objects comprising the displays are the groups of gilt bronze French mounts of the eighteenth and early nineteenth centuries though on view as well are fine examples of English, American, and even oriental fittings. The special richness of the French ormolu group directs the bulk of these notes to it.

Ormolu *(or moulu)*, literally, ground gold, may be described very simply as gilt bronze. Bronze, an alloy of copper and tin, lends itself admirably to the requirements of casting as well as to later refinement of its surface by chasing. One of its principal defects, the comparative ease with which oxides form on and impair its surface, is overcome very effectively by gilding it. As gold is relatively inert and will not form the oxides that appear so rapidly on many other metals, the original beauty and crispness of a gilt metal is maintained for great lengths of time without the need for much of any care except dusting. It is for this reason that ormolu mounts of the eighteenth century often appear as though they had just come from the metalworker's shop and so reveal with surprising exactness as do so few objects of their period their original nature, even to the most minute subtleties of craftsmanship.

An extremely interesting and very illuminating series of objects are the carved wooden model for a handle of a locking bar and the pair of gilt bronze handles[3] (Figs. 2 and 3) which are the satisfying outcome of such painstaking preliminary work. The model speaks most eloquently of the great care lavished even in the early stages of the manufacture of these gilt bronze objects. It is observed that the differences between the model and the finished products are slight and of small importance to the total effect; one has the crispness and vitality of the other and we can only think that the patron for whom these handles were made must have been well satisfied with the final execution from the original design.

The quality of the designs speaks for itself and proclaims that they come frequently from the hands of noted ornamentalists. The collection of prints and drawings of the Museum includes a number of examples of projects for actual mounts and ornament from which such objects could easily be adapted. Jean Charles Delafosse (1734-1789) and Richard de Lalonde (active latter half of the eighteenth century), to name but two almost at random, are represented by a number of instructive and germane examples (Figs. 4

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[3] 1909-25-53, 54, 55.

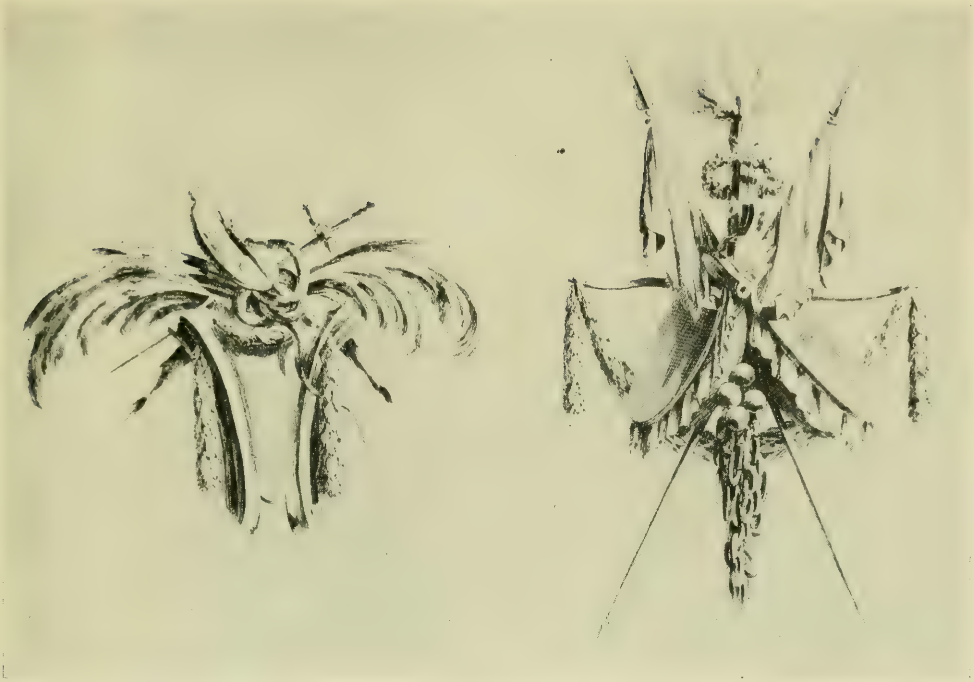

FIGURE 4. TWO TROPHIES FROM THE 3e *Receuil de l'Oeuvre de Delafosse*, PARIS, 1770.

and 5) and reveal at once that happy combination of delicacy and strength which so characterizes the nature of these mounts. An important medallion in the collection may well be after a design of Jean Baptiste Huet (1755-1811), and exhibits all the sureness and accomplished excellence one would expect from such a source.

Important to the success of a furniture piece as a whole was the very close interaction of the *ébéniste* and the *ciseleur,* or chaser. To the name of Jean François Riesener (1735-1806) one immediately links those of Pierre Gouthière (1740-1806) and Pierre Philippe Thomire (1751-1843) who executed many of the superlative mounts which enriched his pieces. It is useless to pause over the question as to whether such elaboration is really suited to furniture; the beauty of the whole, so admirably supported by the exuberance and grace of the part, is reason enough for the production of such things. Isolated from their original settings as these pieces now are, seen as members captured from a familiar though departed milieu, it is improper now to judge them as tables and cabinets. They become more than ever *objets de goût* and almost this alone; they serve as brilliant comments on their time and their creators, on the imagination and the dash of eighteenth-century display (Fig. 1).

Underlying the eventual appearance of an ormolu mount is an intricate series of varying though closely related processes. Design is little without execution and to the men responsible for this, the caster, the chaser, the gilder, we owe our attention. The construction of such a thing as our wooden model requires the greatest patience and skill; the accomplishment of a finished object requires even more.

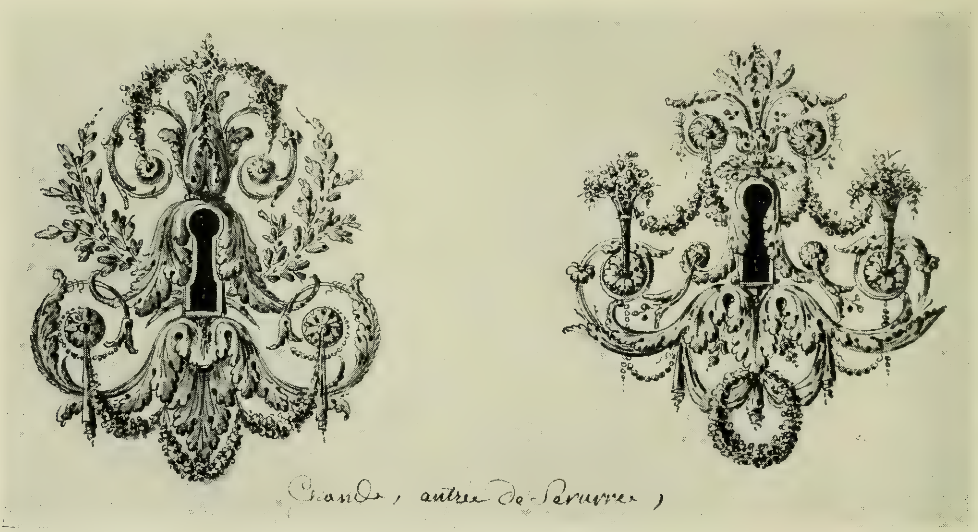

FIGURE 5. TWO DRAWINGS FOR KEY PLATES, BY RICHARD DE LALONDE.

Bronze is highly suitable for casting because it will assume with great accuracy the shape of its mould, no matter how delicate and how intricate the original pattern may be. But the work of the *fondeur* is by no means simple and requires great knowledge and skill. In its natural state bronze is a golden-brown alloy of considerable beauty and hardness. Its surface can be tooled with great precision; this is the work of the *ciseleur*. A plate from the great Diderot encyclopaedia[4] shows the interior of the shop of an eighteenth century *ciseleur* in a most fascinating manner (Fig. 6); we see the workmen engaged in the various steps of their craft surrounded by their tools

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[4] *Encyclopédie, ou Dictionnaire raisonné des Sciences . . . Recueil de planches,* vol. III; *Ciseleur,* pl. I.

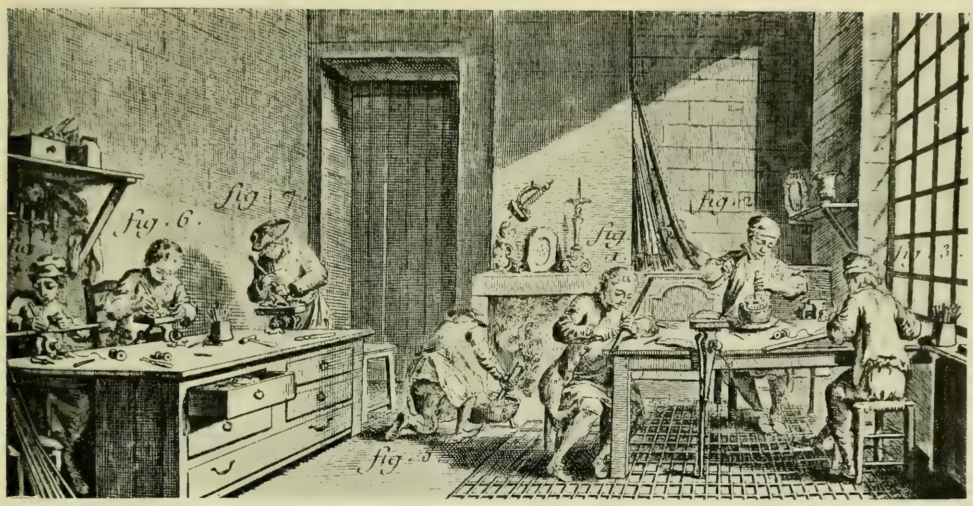

FIGURE 6. CHASER'S SHOP FROM THE *Recueil de Planches . . .* , VOLUME III, *Ciseleur*, OF THE *Encyclopédie.*

and groups of objects in various states of completion. The gilder, who often was the *ciseleur* as well (André Charles Boulle is entered in a contemporary account not only as a cabinet-maker but also as a chaser and gilder), brings the surface to its final form. Mercury or "fire" gilding was the common practice. This is done by first obtaining an amalgam of mercury and gold. The amalgam is brushed with wire brushes onto the surface, which has been cleaned as perfectly as possible. The piece, because of the color of the mercury, now looks as though it had been silvered. When the mount is heated to the correct temperature, the mercury passes off as a gas (and can be re-collected), leaving a thin deposit of metallic gold on the surface. This film is cleaned and worked by burnishing or other means to the desired quality and brilliance. It has already been observed that this gilt surface is strikingly permanent, as peculiarly stable as gold itself. A second plate from the *Encyclopédie* illustrates the shop of a gilder[5] (Fig. 7). This process of mercury gilding was almost as dangerous as it was effective; the greatest care had to be exercised to prevent the workmen from inhaling any of the vaporized metal, for mercury poisoning produces some of the most unpleasant effects imaginable.

Perhaps even these brief notes will give some idea of the tremendous amount of effort involved in taking an ormolu mount from the first conception of its design through the making of the model, the process of sand

[5] *op. cit.*, vol. III; *Doreur*, pl. I.

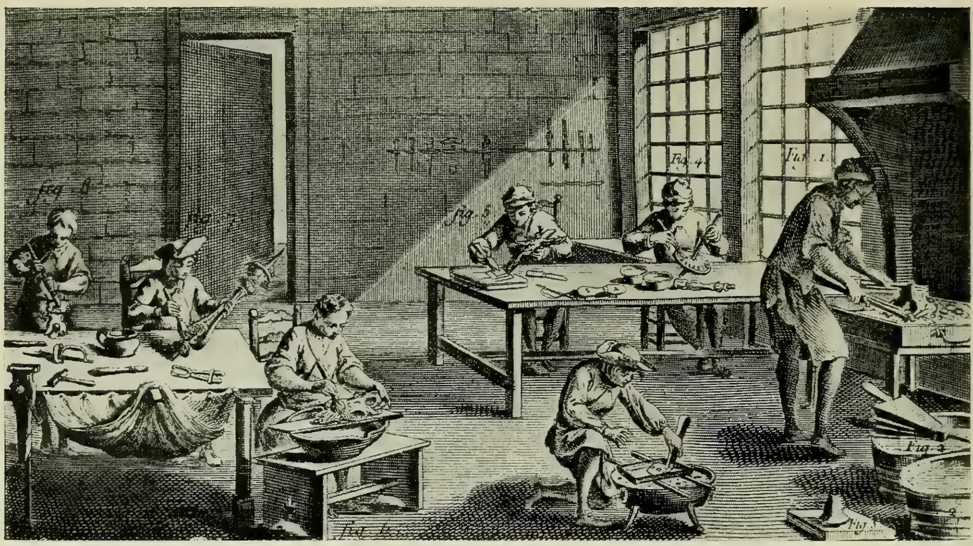

FIGURE 7. GILDER'S SHOP FROM THE *Recueil de Planches . . .*, VOLUME III, *Doreur*, OF THE *Encyclopédie.*

casting, of chasing, and of gilding. One has only to look at the great numbers of these objects still preserved to realize the high degree of excellence and organization in the mechanics of their production which were required to make possible not only the quality but also the astonishingly prolific output of the eighteenth-century French shops.

We have already twice come upon the name of André Charles Boulle and his work for Louis XIV. After such an auspicious introduction we are not surprised at the supreme achievements of those to follow. During the reign of Louis XV the Caffiéri (Jacques Caffiéri, 1678-1755; Philippe Caffiéri, 1714-1774) stood almost alone in their works which may be noted on furniture in the Wallace Collection and on pieces now in the Louvre. The delightful masks and busts adorning a number of these pieces reach almost the importance of major art; notable at once for firmness, for grace, and superlative finish, they reflect the demands of the patron and the skill of the men who met them. The accusations of femininity leveled against the productions of this time lose a great deal of their force when set against these actual objects. Of their grace and their almost purely ornamental function there can be little doubt. Fashion demanded this nature in things; genius and industry supplied it. Whether at last we do or do not wholly approve the face of the age, the Caffiéri and those only slightly less skilled who accompanied them and their scarcely less skilled contemporaries.

The mounts produced during the reign of Louis XVI, which claim here our special notice, quickly reveal the discipline of the antique reflected in the integrity of the artists who designed and made them. For the most part physically smaller than those of the preceding reign, more self-contained, of course much more symmetrical, and, if possible, even more highly finished, they ornamented pieces of ordered rectangular volume, straight line, flat or simply curved plane, and most frequently less extensive size. As a matter of simple observation, the furniture was not less ornate but only more highly ordered in its organization and more simply profiled.

Though it is not our purpose to examine the *ébéniste* as such, the important relationship of the *ciseleur* to the cabinet-maker mentioned above demands that we note at least one such association. That of Riesener with Gouthière is of such importance that it must not be overlooked. Here the quality of the cabinet is matched by that of the mount. The finely conceived and finished masses of the one are complemented and enhanced by the intricate brilliance of the other. Also linked with the name of Riesener is that of Thomire, who is responsible for many of the mounts appearing on the furniture of the former. It is a little sad that Thomire's talents should have been squandered by the taste of his later patrons; his nineteenth-century work when compared with his finest achievements is heavy and spiritless and unworthy, lacking almost entirely the charm and vivacity of his best things.

But by far the greatest number of ormolu mounts now conserved apart from their parent pieces bear an anonymity ill-deserved by their quality. We wonder at their authorship as we wonder at their number; they exist in hundreds as did their makers. The really astonishing thing is the consistency of their merit, and, in turn, the consistency of the taste and time which expected it. We are fortunate that accumulations of mounts from the shops of cabinet-makers and bronze workers, left over when these men ended their careers, have come to us at times in practically mint state.[6]

When we turn directly to the mounts in the collection itself, going from one drawer to the next, finding in each a new pleasure, a different flavor, a delightful feeling in the turn of the chisel first of this master, then of that, the variety of such expression within the framework of a few great styles becomes increasingly impressive. This is not, as it might easily have been, ornamentation by rote or by convention, but the catching of individual excitement and delight in creation. The pieces as things in themselves never step beyond the limits of their styles, but within such gentle stringencies move about with freshness and freedom which give ample opportunity for

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[6] In this way a group of mounts in the Museum come from the cabinet-making shop of John Hewitt.

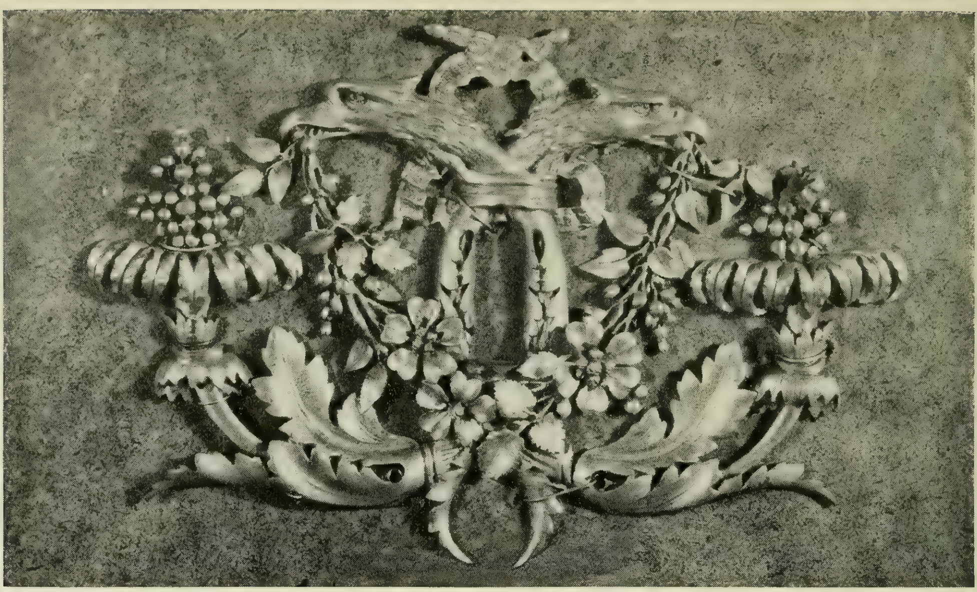

FIGURE 8. GILT BRONZE KEY PLATE, ABOUT 1780, ATTRIBUTED TO GOUTHIÈRE.

the exercise of individual talent and tastefulness.

A frieze[7] from a Louis XVI commode establishes at once in its repeated scrolls a firm rhythm reiterated more softly in its gracefully disposed floral elements, the movement of the whole emphasized by variations in the quality of surface. The margins of the scrollwork are, with parts of the floriation, burnished to a special brilliance; other portions of the design are worked all over with an even stippling which lends depth and decision to the entire conception. These surface variations, brought about by burnishing, hatching, stippling, and other treatments, are most important to the total effect of an ormolu mount. Throughout the collection such techniques serve variously to emphasize, to play down, to soften, to make crisp, to lighten, to lend weight to a marginal band, a stem, a leaf, or mask, serve, in short, almost as much as the design itself to express the talent and individuality of the *ciseleur*. Such technical facility is not, alas, the guarantee of an excellent mount, and becomes finally, in the early nineteenth century, almost a chill wind which dispels what little warmth one might expect to find in the unreason and artificiality of that form of neoclassicism in vogue.

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[7] 1908-26-63A to G. This piece, along with the majority of others of its period in the Museum, came from the collection of M. Léon Decloux, a French architect and collector whose father was *Serrurier* to the Court of Louis-Philippe.

But such impersonality does not exist where the finish one finds on the charming key plate[8] (Fig. 8), executed very probably by the celebrated Gouthière, is a fine example of the expressive possibilities inherent in technical skills. The leaves and flowers lend delicacy, the eagles' heads strength, and the larger foliations body, while the underlying organization of all elements imposes a firm unity on the complete thing. Here are the crispness and perfection we would expect from Gouthière, the curious and happy mixture of dash and restraint and technical perfection existing not for itself but for the ease and completion it gives the ornament.

Again, in another mount, this time a frieze[9] (Fig. 9), the hand of the same man may well be seen. Composed of bow and arrows, quiver, flambeau, and a garland and sprays of leaves and flowers, this object is in itself almost the essence of small Louis XVI design. Here again crispness, balance, and élan combine in a work which for all its small size could characterize the work of Gouthière and typify the sort of thing to which his fellows strove. The almost languorous form of the laurel leaf, the masculinity of the oak, the freshness of the rose blossoms are bound together with equally effective representations of implements of the hunt. Delicate, romantic, and oddly powerful, such objects speak forcefully of the taste and skill of their era.

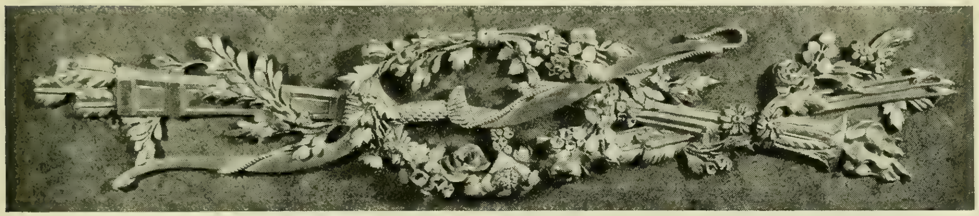

FIGURE 9. GILT BRONZE FRIEZE, ABOUT 1780, ALSO ATTRIBUTED TO GOUTHIÈRE. THIS AND FIGURE 8 SERVE TO ILLUSTRATE THE EXTREME FINENESS OF THIS MASTER'S WORK.

In a pair of small pendants[10] we find, caught together with leaves and fruits, a favorite flower of the ornamentalist of this period, the lily of the valley. Engaging little sprays of this blossom adorn many of the mounts in the collection, lending their special grace to numbers of ormolu fittings. Laurel leaves are another favorite motif, along with oak leaves, pomegranates, roses, cornflowers, and more severe classicistic foliations. Ribbons are

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[8] 1909-25-14.

[9] 1910-30-16.

[10] 1910-30-21A and B.

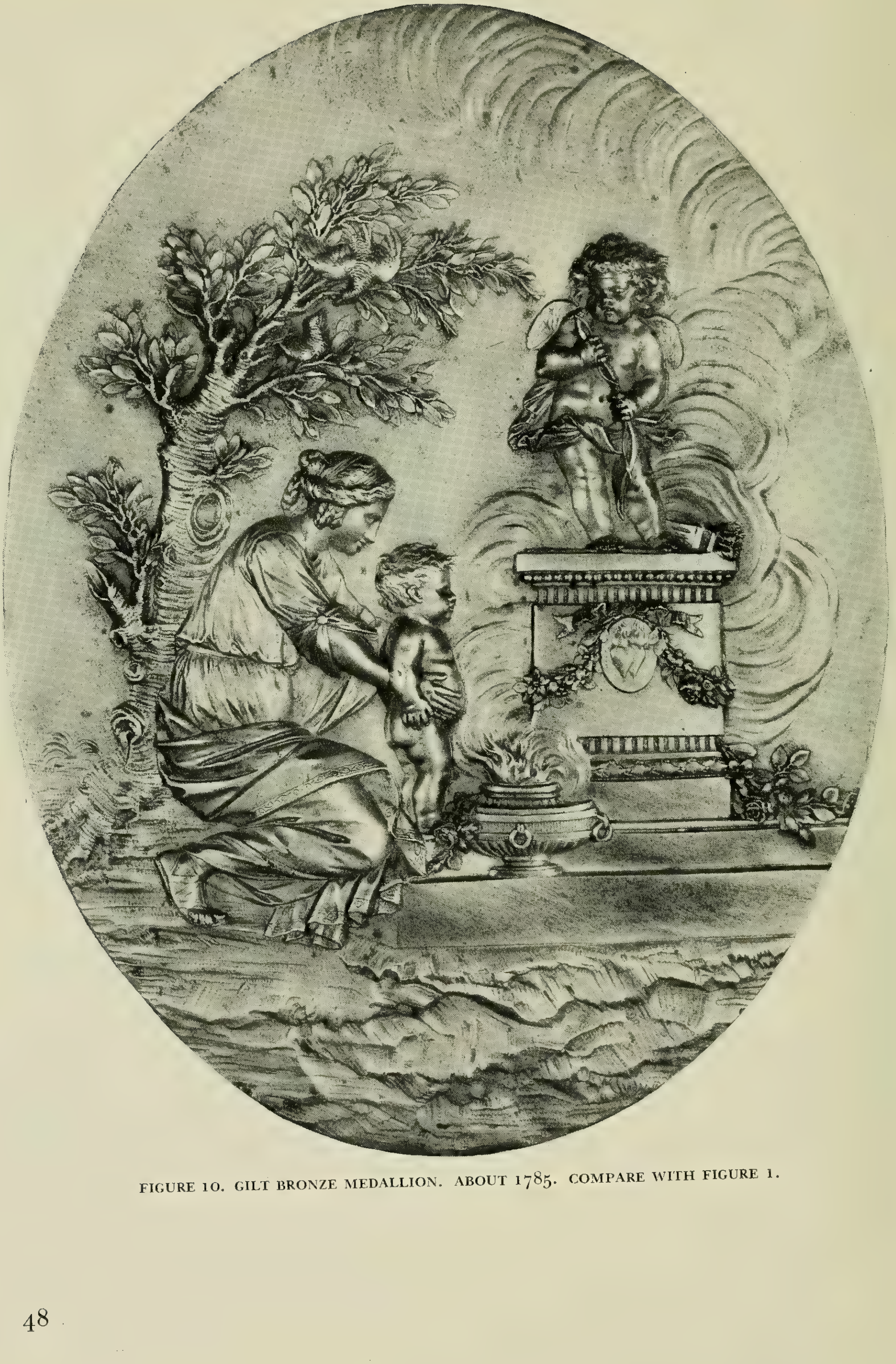

FIGURE 10. GILT BRONZE MEDALLION. ABOUT 1785. COMPARE WITH FIGURE 1.

used to bind together many compositions, bows are very often met along with swags and knots of various sorts. Cornucopias, generally in pairs, the heads of eagles, trophies, and palms are other favorite devices. Much ornament reminiscent of the antique is encountered including masks, vintage elements, vessels, mouldings, and the like, while rayed ornament is not rare.

Two oval medallions of rather large size attract our attention. The first[11] (see cover), which we have suggested as being after the style of Huet, is especially notable for its fine execution. All that we have observed of the highest class of work holds good here. Among many of the motifs we have mentioned, two doves, chiselled with great skill to an almost deceptive softness, display themselves in attitudes which one might suppose only a third dove could fully appreciate. Here especially we can enjoy the effects of several treatments of surface; the interplay of mat with burnished elements, the textures of flowers, of feathers, leaves, and clouds compared and opposed make the enjoyment of this work a really pleasant as well as instructive experience.

The second medallion[12] (Fig. 10) bears a rather more strictly classicistic composition relatively unrelieved by the conceits we have noted above. The figures, and indeed all the parts of the composition, are very well drawn; and merely as a point of technique, relief modelling is here brought to a high degree of excellence though the surface is not perhaps of such fine quality as that of the first. Other examples of both these medallions are mounted on furniture pieces, at Hertford House, by Riesener (Fig. 1), where they appear to great advantage.[13]

The origins of several pieces in the Museum's collections can be stated with fair certainty. One double pendant of flowers held by ribbons[14] (not gilt but very finely chased on every surface), originally from the collection of M. Dupont d'Auberville, was one of the fittings of the Château de Saint-Cloud. A rather large group of gilt bronze objects[15] is from two salons of the Château d'Issy; among these are locks, key plates, rosettes, portions of espagnolettes, and small fittings of various sorts. A group of such objects known to have been originally associated together is of great interest (Fig. 11).

Door hardware is well represented among the objects displayed. Of special interest is a large door lock of the period of the Regency.[16] Against a very characteristic finely diapered ground, strictly symmetrical scrollwork con-

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[11] 1910-30-10.

[12] 1931-83-x.

[13] Molinier (Molinier, Émile; *The Wallace Collection*, vol. III) is inclined to attribute both these medallions to Thomire. Robiquet (Robiquet, Jacques; *Gouthière*, pp. 166, 167; pl. XIV, XVI) lists them as being the work of Gouthière.

[14] 1909-25-12.

[15] 1909-25-30 to 35.

[16] 1909-25-47A.

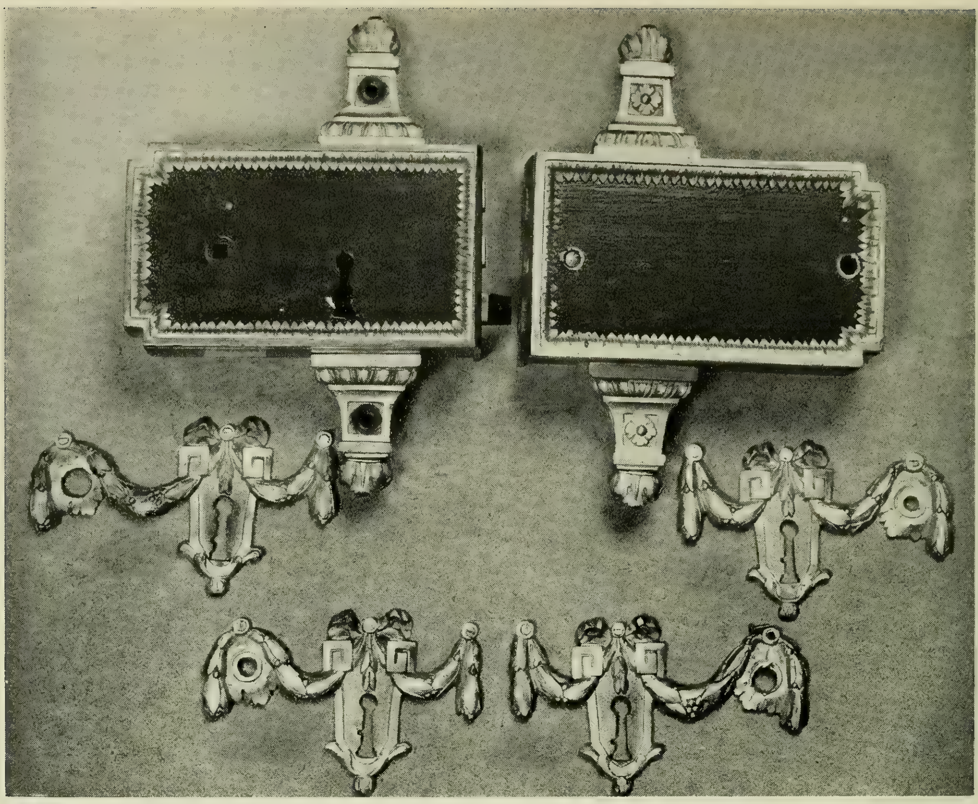

FIGURE 11. DOOR HARDWARE FROM A SALON OF THE *Château d'Issy*. ABOUT 1780.

fines the openings for the keys and the door handle. The whole is a fitting of great magnificence though surely no richer than a similar piece[17] (Fig. 12) of the period of Louis XV. This is adorned, above its somewhat abstract scrolled decoration, with a sphinx which with admirable discretion controls the lock mechanism. A second Regency lock[18] (Fig. 13), apparently from the door of a royal chapel, bears among its other decoration a device composed of a baton terminating with the hand of justice, another terminating in a *fleur de lis,* the two crossed through a crown of thorns, and the whole resting on a tasseled cushion. For this early period, the workmanship is of especially fine quality.

Mounts for both clocks and vases are also included in the displays along with decorations for furniture too numerous to describe. The whole group

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[17] 1909-25-13A.
[18] 1909-25-80.

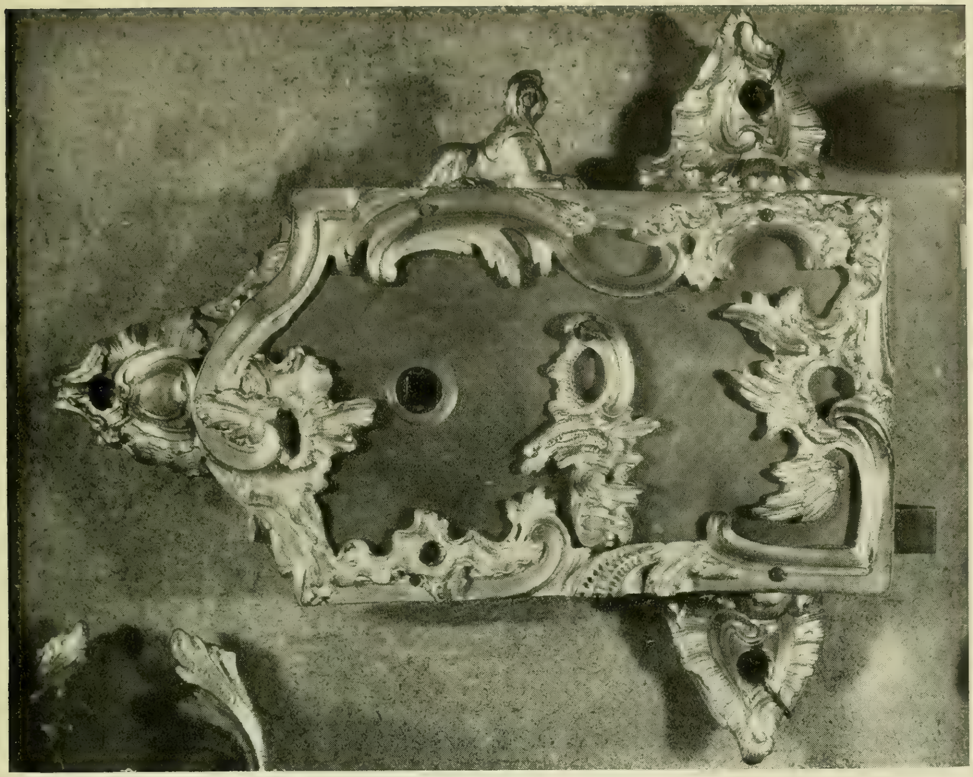

FIGURE 12. GILT BRONZE DOOR LOCK. ABOUT 1750.

comprises, especially in its later phases, an excellent sampling of small eighteenth-century work in gilt bronze.

The whole character of Empire ormolu is different from that of the preceding periods. Here the return to antique example is much more literal, more exact, even somewhat cold-blooded. The finish of the best examples is certainly inferior to none; the execution is almost without fault. Yet the whole aspect is cold, austere, much as we would expect in such reaction and after such upheaval. Here the figures do not move in the atmosphere we felt about the delightful blossoms and ribbons of the eighteenth century. These designs make no effort to extend themselves beyond their physical limits, but present themselves with truly metallic finality to the gaze of the observer. It is a sort of classic art which possesses none of the impetus of the original, none of the spark, but exhibits itself, beautiful in death, without life and asking none. With these things before us, possibly we may not enter into such active admiration as we have with earlier pieces; yet in so far as mere technical achievement may excite us and virtual perfection of its own sort compel our admiration, we must give attention to the works of this strange and artificial period.

Of particularly high quality is an applique representing the train of Bacchus in which the god's feminine companions appear in a chariot drawn

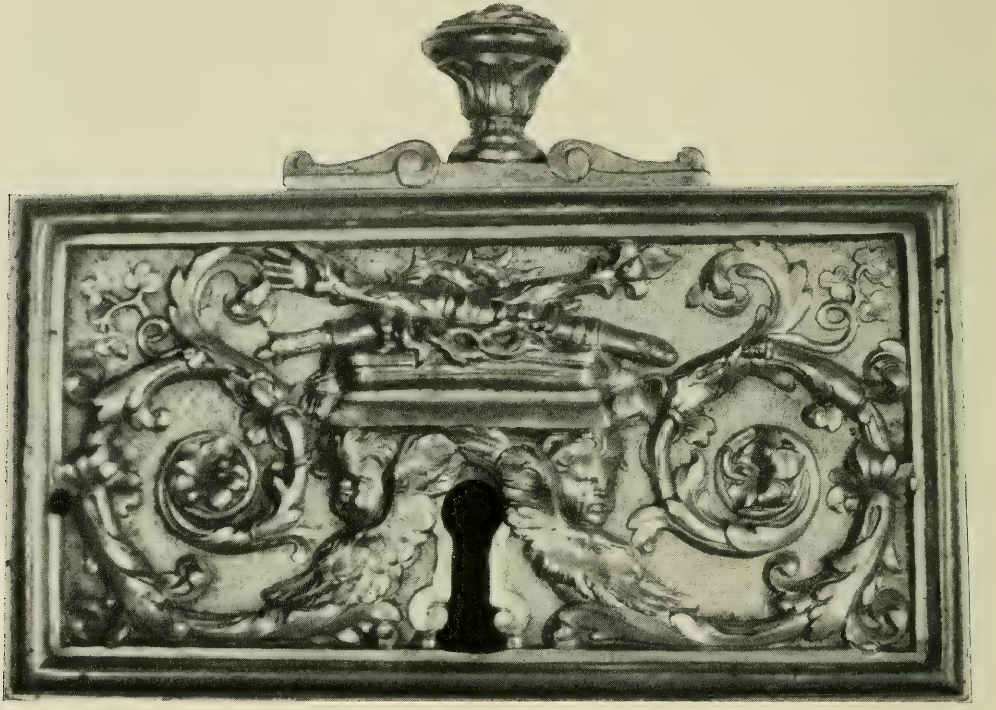

FIGURE 13. GILT BRONZE DOOR LOCK FROM A ROYAL CHAPEL. ABOUT 1715-20.

by lions surrounded by their followers[19] (Fig. 14). This is a fine bronze to look at from every aspect of technique and composition. The drawing of the animals and the figures is superb; the quality of the chasing and the gilding is of the highest with the hides of the animals, the skins of the revellers, the chariot, and the foliations worked out in variations of surface that astonish us with their facility. The suggested accusation of coldness, however, can be applied even to this lively scene for it is a loveliness of execution rather than of conception which intrigues us. It is an aspect of antique art translated

[19] 1925-1-31.

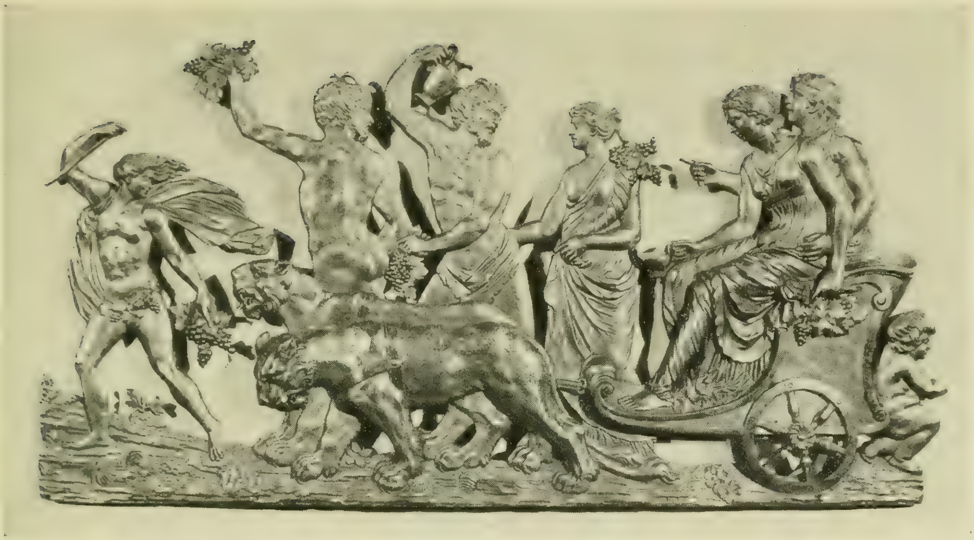

FIGURE 14. GILT BRONZE APPLIQUE REPRESENTING THE TRAIN OF BACCHUS. ABOUT 1805.

into a late idiom, and we find ourselves captivated by the act of translation rather than its result.

Also in the groups of nineteenth-century mounts are a number of blackened bronze figures[20] which must have been strikingly effective against a background of highly polished honey-colored wood. The little *putti* astride sea monsters (Fig. 15) are particularly fascinating as they might have been taken directly from an ebony frieze adorning a French cabinet of about 1620, an apparent stylistic debt which leads us to an interesting and somewhat obvious conclusion. Just how genuine this debt may be is hard to say; but other instances support the thought and no immediate contradiction is at hand.

Another group of mounts to which we may turn is that composed of a series of rather heavy ring handles in the form of garlands of fruits and flowers,[21] a number of exceptionally assertive knobs and appliques,[22] and several cornucopias and other containers bursting with the goodness of the beneficent seasons.[23] In that they typify generally the work of their period they interest us; but what poverty of imagination they display when confronted with a really good Louis XVI mount from which, in many instances,

[20] 1904-1-20 *et seq.*
[21] 1904-20-464, etc.
[22] 1904-20-316, etc.
[23] 1904-20-36, etc.

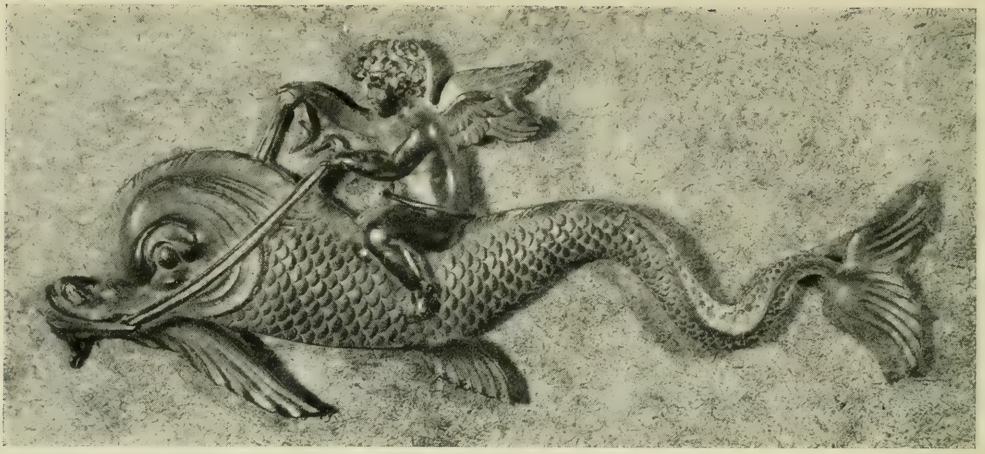

FIGURE 15. BLACKENED BRONZE APPLIQUE. ABOUT 1815.

they take inspiration. Then there are groups of friezes and galleries of satisfactory workmanship and good color,[24] *acrothemia* and palmettes in great number[25] (Fig. 16), many of a striking fleshiness, and mounts of similar nature in great variety. Such a collection serves well to establish a key to the general requirements of this style and to provide a rich source at which to observe and understand this sort of ornament. The whole may function, in other words, as a source-book of design, and as such is of the very greatest value.

The collection of furniture mounts in the Cooper Union Museum is admirably arranged for purposes of study in an extensive series of shallow drawers which may be pulled out at the pleasure of the visitor. Each drawer is fully labelled. In effect one has available a library of actual objects organized for convenience and presented in the most accessible way possible for study or pleasure. The student will find his work simplified and his patience spared by the present arrangement in the Museum.

Also available conveniently are the collections of prints and drawings, in which much valuable material is to be found, the references housed in the Museum Library, and the large groups of photographs and other reproductions collected together in the Picture Library. In all, the objects themselves and the related references found in the Cooper Union Museum offer a rare opportunity to the student or connoisseur for the study and enjoyment of this most engaging aspect of decoration in the eighteenth and other centuries.

James I. Rambo

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[24] 1904-20-138, etc.
[25] 1904-20-243, etc.

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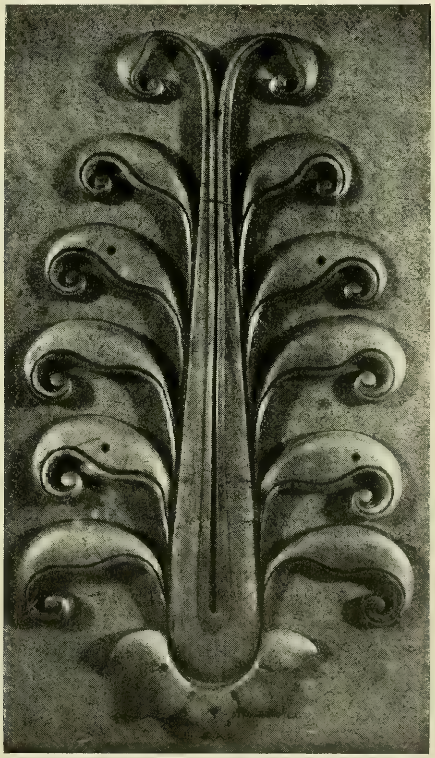

FIGURE 16. GILT BRONZE APPLIQUÉ. POSSIBLY ENGLISH. ABOUT 1810.

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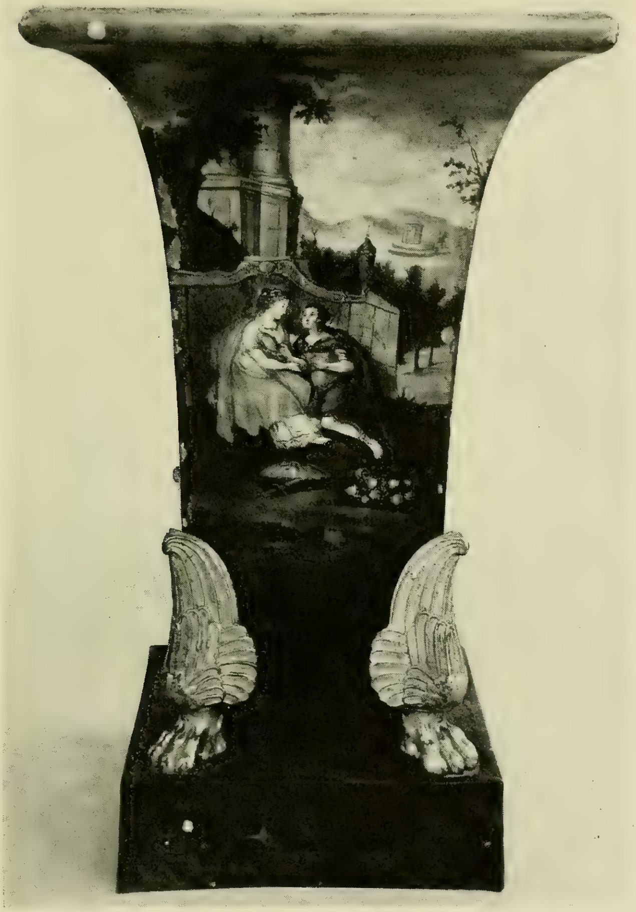
CHRONICLE OF THE MUSEUM FOR THE ARTS OF DECORATION OF THE COOPER UNION



Tôle vase. France, about 1815. Painted representation of Venus and Anchises on Mount Ida.

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CHRONICLE OF THE MUSEUM FOR THE ARTS OF DECORATION OF THE COOPER UNION

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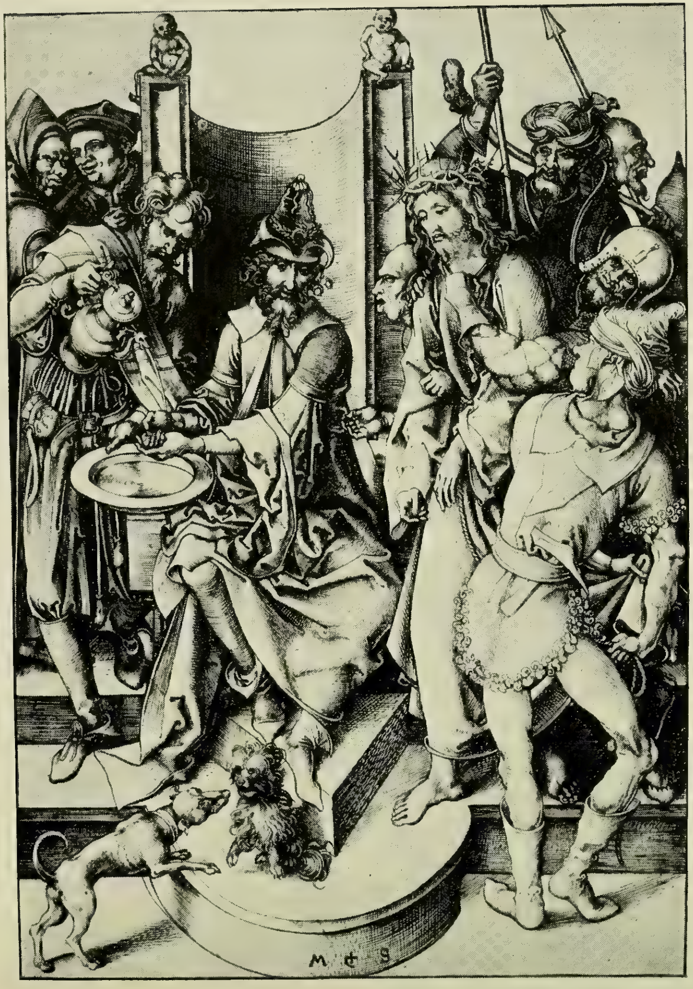
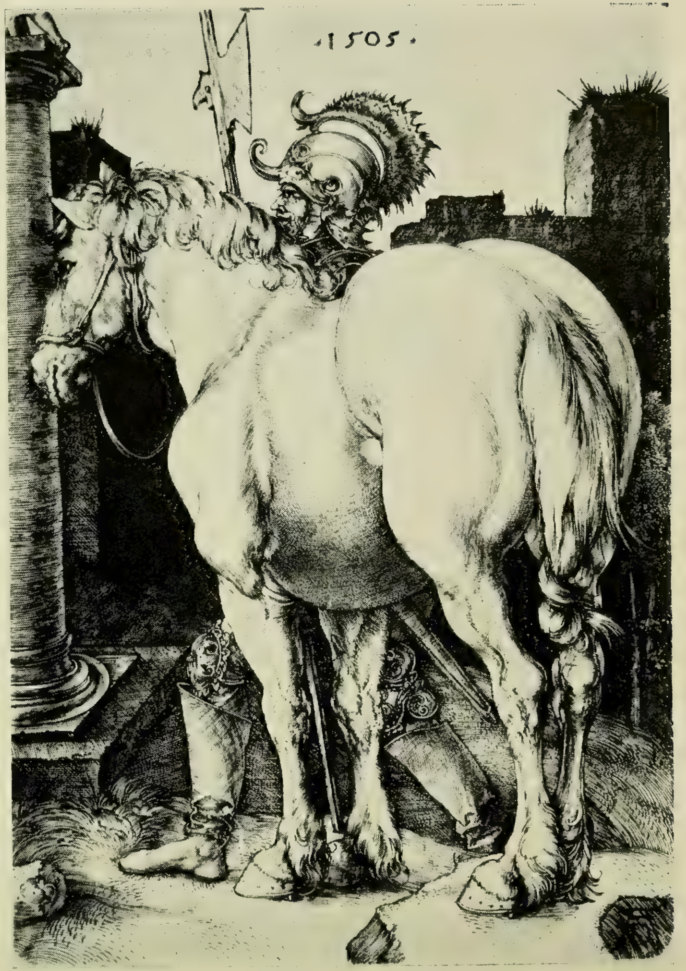
In this issue of the *Chronicle* is presented a brief account of the remarkable addition made to the Museum's print collection by the generosity of Mr. Leo Wallerstein. In a series of gifts over the past two years, chiefly of prints by the sixteenth century German masters and by Rembrandt, Mr. Wallerstein has greatly strengthened the holdings of the Museum. It is especially heartening when a discriminating collector makes so freely available to the public the treasures that he has collected with knowledge and care; a showing of this magnificent gift in the autumn will reveal more fully these riches for which the Museum is so grateful.

This issue contains also, like many of its predecessors, a study of a single category of the material included in the Museum's collections. More clearly than many crafts the painting of tôle illustrates the happy alliance of technique and design by which are produced objects of perennial appeal. Although tôle has been of fairly constant use for the past two centuries, and enjoys great favor at the present time, sources of information about its history are not easy to find; the article in the following pages, it is hoped, will fill this small and attractive corner of the bibliography of the decorative arts.



MARTIN SCHONGAUER (1420-1491). *Christ Before Pilate; about 1485.* Given by Leo Wallerstein, 1950.



ALBRECHT DÜRER (1471-1528). *The Great Horse;* 1505. Given by Leo Wallerstein, 1950.

THE GIFT OF LEO WALLERSTEIN

The Museum has been made the happy recipient of an extensive collection of engravings, etchings, and woodcuts which has been presented by Mr. Leo Wallerstein.

In twelve gifts since December 1948 Mr. Wallerstein has selected 358 prints from his collection. They consist principally of outstanding examples by master print-makers of Germany in the sixteenth century and of the Netherlands in the seventeenth, with particular emphasis on the engravings and woodcuts of Albrecht Dürer, and the etched work of Rembrandt. The George Campbell Cooper collection, received as a bequest by the Museum in 1896, was a large and general collection of prints covering all schools from the fifteenth to the nineteenth century. Although serving as an ideal nucleus for the young museum, it necessarily left wide gaps within the narrower and special categories. Mr. Wallerstein's gifts now more than adequately fill a long-felt need in the sequence of development of print-making in Germany of the sixteenth century.

The 107 Dürer engravings and woodcuts, supplemented by the holdings by the master already in the Museum, form an impressive representation covering all phases of one of the most important graphic careers in print-making history. The 49 etchings by Rembrandt add equally to the growth of the Print Room's collection of the artist's accomplishment in the field, and it is interesting to note the preference of Mr. Wallerstein for the mature period of his production. The first examples of prints by Hans Sebald Lautensack and Israhel van Meckenem come through the generosity of the Wallerstein gifts, as well as several of the most important engravings of Martin Schongauer.

Mr. Wallerstein recalls that he began to acquire prints on a small scale some thirty years ago, that he was greatly stimulated by them and learned much from studying them. Later, he augmented these early efforts by purchasing important prints from dealers here and abroad, and through the auction market. He especially credits Dr. Theodor Hampe of the Germanisches Museum in Nuremberg with valuable advice and assistance.

Above all, Mr. Wallerstein's collection represents his personal judgment and taste. He has never sought completion in any section, preferring quality as a determining factor. Astute and discerning, his special interest in the small exquisite engravings of Hans Sebald Beham displays the high standard of the true collector.

The donor knows The Cooper Union well. He was a student in the chemistry course of the school from 1903 to 1905. It was during a visit to his old school early in 1948 that Mr. Wallerstein was welcomed by Dr. Edwin S. Burdell, the Director. On this occasion he saw the Museum. After noting the development of the Print Room and its collections, as well as realizing the value of the material to students, he decided to make the first of his many important gifts to the Museum.

A very modest man, Mr. Wallerstein dislikes any fanfare which might tend to publicize his generosity. He consented to the publication of this note only when it was pointed out that there would be many in the future interested in knowing something about the donor and his collection. Even then he wished it emphasized that his gifts were based on the deep gratitude he felt for the privileges afforded him as a student of The Cooper Union and that he would be happy if this attitude should serve as an example to others.

E. Maurice Bloch

SOME FRENCH AND ENGLISH TOLE IN THE COOPER UNION MUSEUM

The painting of metal accessories of decoration, while not the most spectacular nor demanding of the minor arts, is surely an engaging pleasure or occupation, though since the beginnings of the craft, somewhere late in the seventeenth century, its practice has suffered the usual fluctuations of fashion and demand. In recent years there has been a healthy revival of interest both in the objects themselves and in their production, a fact not surprising in view of the decorative and useful value of tôle pieces. It is difficult to imagine an art at which such a variety of hands have been tried, hands ranging in skill from the most professional to the most plainly amateur. But perhaps it is the very fact that a pleasing result can reasonably be expected from almost any attempt that accounts for the wide expenditures of energy and talent at virtually every level. Certainly the eagerness with which the production of tôle articles is approached today was fully matched by the lady of fashion of the eighteenth century. In a letter to her sister written in 1727, Mrs. Pendarves remarks that

> ". . . everybody's mad about Japan work, I hope to be a dab at it by the time I see you. I will perfect myself in the art and bring materials with me."[1]

Such delight in the learning and application of a popular skill is demonstrated two centuries and a quarter later by the appearance of a number of technical manuals and, indeed, by the display on shelf and sideboard of the efforts of the newly taught. Behind these modern pieces lies the absorbing history of the first years of tôle painting, of the struggles of the experimenters and technicians, and of the accomplishments of designer and artist.

The Museum is fortunate in the possession of a small but eloquent collection of early painted tôle, most of which originated in France or in England. The United States is not yet represented in the collections, a lack which we hope the future may fill. But the eighteenth and nineteenth century objects to be examined supply a rich background for the study and enjoyment of later pieces and are so varied in their nature and technique as to provide expressive material for discussion.

The French word itself, *tôle,* is derived from *taule,* in turn a form of *table,* and has the literal meaning of thin sheet or tablet of iron. Thus for our purpose "painted tôle" would be the most accurate term to use; but the shorter "tôle" has found such general acceptance that it will be used hereafter to describe tôle ware. Further, while tôle in England generally means painted sheets of iron, tinned or untinned, it more rarely designates painted pewter, a usage more popularly accepted in France where painted copper is also thus described. In the early years of the craft, it was called *japan,* a reference dictated by its oriental origin. Indeed, as late as 1779 we are told in an edition of the *Chambers Cyclopaedia* which appeared in London during that year that japanning is the art of varnishing "after the same manner as the workmen do who are natives of Japan, a famous island not far from the coast of China." It may be convenient here to note that the "tin" of England is called *Blik* in Holland, where pewter is known as *Tin.* When painted, both are there called *Wallisch lacwerk* (Welsh lacquer).

Lacquered objects had been imported into Europe early in the seventeenth century by the English, the Dutch, and the Portuguese. But it seems unlikely that they enjoyed any status other than that of curiosities until the Restoration when Charles II was responsible for popularizing small pieces and furniture with lacquered surfaces in the oriental style. The first articles of domestic manufacture were adapted somewhat freely from this same style, and pattern books, which contained rather verbose directions for the accomplishment of the art, appeared late in the century. Stalker and Parker's *Treatise of Japanning and Varnishing* was published in London in 1688 complete with full directions and a series of fascinating if crude designs (Fig. 3) including a pair of highly entertaining "Pagod" (pagan) rites.

But an examination of these early references reveals immediately that the secret of true oriental lacquer had not been imported along with oriental lacquered objects. Genuine oriental lacquer is composed of a number of coats of the sap of a tree, *Rhus vernicifera.* European japan on the other hand made use of other gums which were capable of producing a similar effect. Among these were gum-lac or seed-lac, a substance deposited on twigs by the insect *Coccus lacca;* dragon's blood, a red-colored resin obtainable from several plants; isinglass, a gelatin got by processing the bladders of several species of fish; and gum-copal, another vegetable gum. Though not entirely suitable, it is probable that these substances were occasionally employed in the decoration of metal objects.[2]

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[1] Quoted in Macquoid and Edwards; *The dictionary of English furniture;* London, 1926; *Japanning,* vol. 3, p. 266 *et seq.*

The popularity of lacquer and lacquering during the eighteenth century has already been suggested. It was mentioned to Lady Walpole in 1735 as a "polite accomplishment", a suggestion she seems to have acted on, for a description later in the century of the contents of Strawberry Hill mentions a cabinet from her hand. It seems likely that she would, along with other ladies of her time, have decorated metal objects as well. The great Horace Walpole appears to have been generally unimpressed by such industry, condemning at one time "two vile china jars that look like modern japanning by ladies."

The women of the French eighteenth and early nineteenth centuries were also caught up in the vogue; Mme. Récamier along with other elegant ladies is known to have collected avidly. This taste for tôle in France in the late eighteenth and early nineteenth centuries may popularly have been dictated by the hard times following the Revolution and the Napoleonic Wars, for the material combined beauty with relatively low cost. In England it remained in favor until the introduction, around 1840, of electroplating. *Papier mâché,* too, played a part in its decline, with many factories previously given over to the production of painted metals turning gradually to the new and lighter material.

The practicability of the commercial manu-

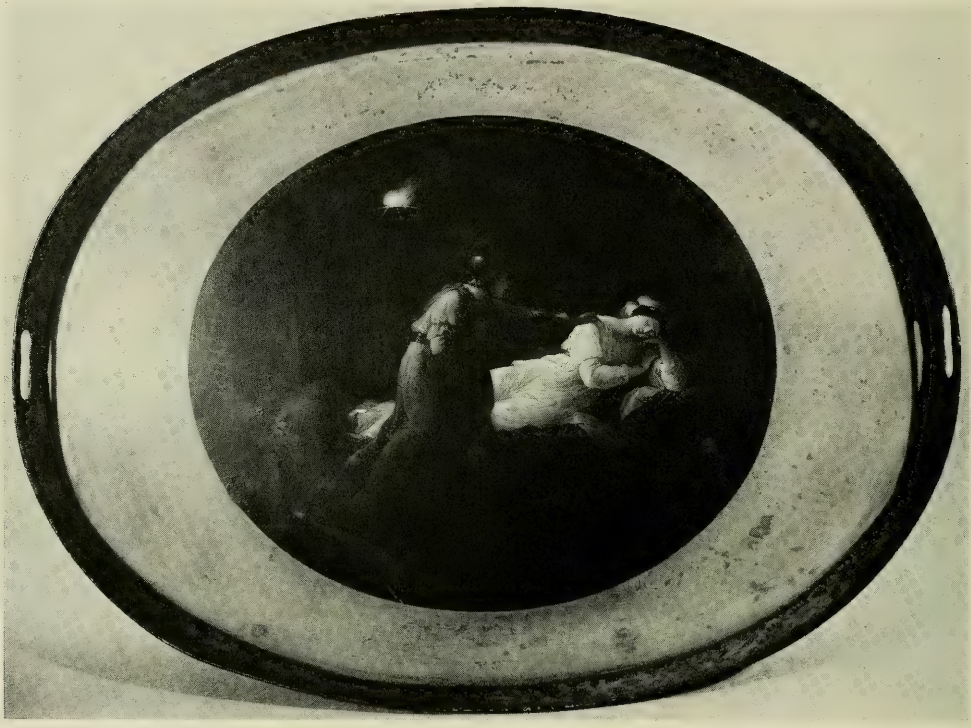

FIGURE 1. Tôle tray. England, about 1800.

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[2] In 1729, Gumley and Turing, cabinet-makers to the King, include in their accounts "japanning four large tin receivers in Red with neat drawings in silver . . ."

facture of painted metal objects depended largely on the conjunction of three things; demand, a suitable material to decorate, and a substance with which to decorate. These came together at the end of the seventeenth century in the little town of Pontypool, located in Monmouthshire near the Welsh border. It was to this place that Thomas Allgood, of Northampton, came about 1660 to join John Hanbury's iron works as a manager. Here, where rolled plate, so much more smooth and even than the previous hand-hammered sheets, was available to him, he undertook his experiments with copperas, or ferrous sulphate, a by-product of iron-pickling, in an attempt to find "a substance capable of application, under heat, to metal, which made a hard lacquer." In this he was successful, though it seems he undertook no extended commercial application of his discoveries. Upon his death in 1710, his secret passed to his sons, and it is to Edward that credit goes for the first production, around 1730, of the new ware. Apparently the business was conducted as a family affair, with the brothers, their wives, and their children working together. Competition appears to have arisen quickly and must have been to some extent successful, a point on which Archdeacon Coxe, the historian of Monmouthshire, throws an amusing light. With some relish he informs us that the factory at Pontypool was

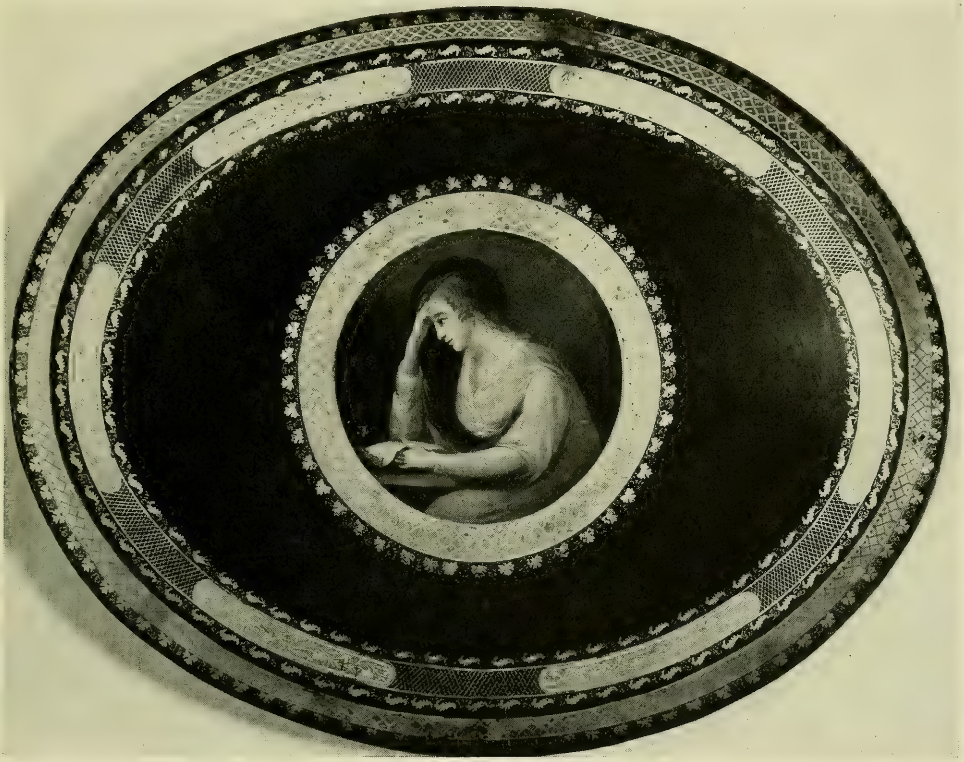

FIGURE 2. Tôle tray. England, about 1810.

> ". . . deficient in the way of polishing to that established at Woburn, in Bedfordshire; and

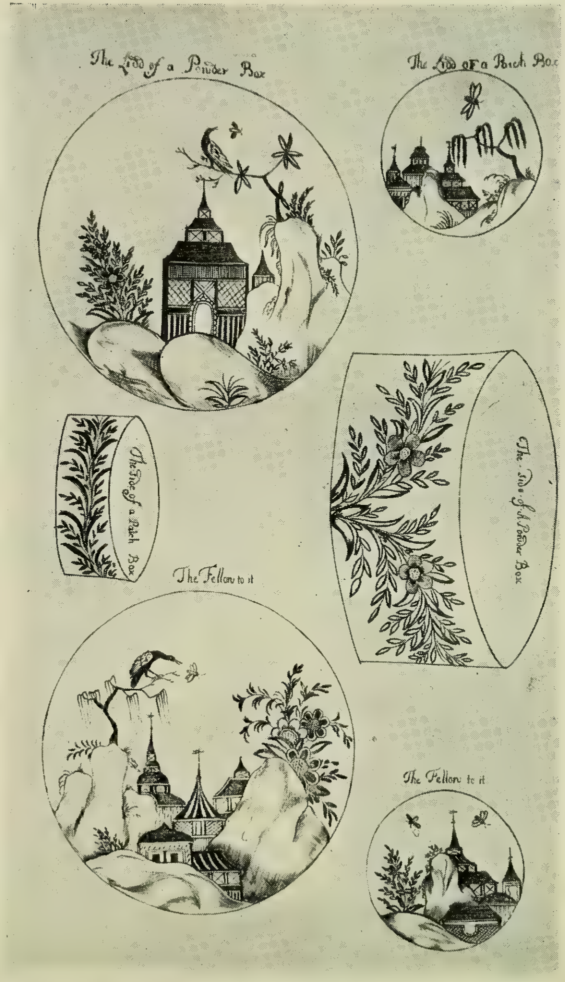
The Lidd of a Powder Box
The Lidd of a Patch Bo
The Side of a Patch Box
The Side of A Powder Box
The Fellow to it
The Fellow to it

FIGURE 3. Plate 1 from *A Treatise of Japaning and Varnishing* by John Stalker and George Parker, Oxford, 1688.

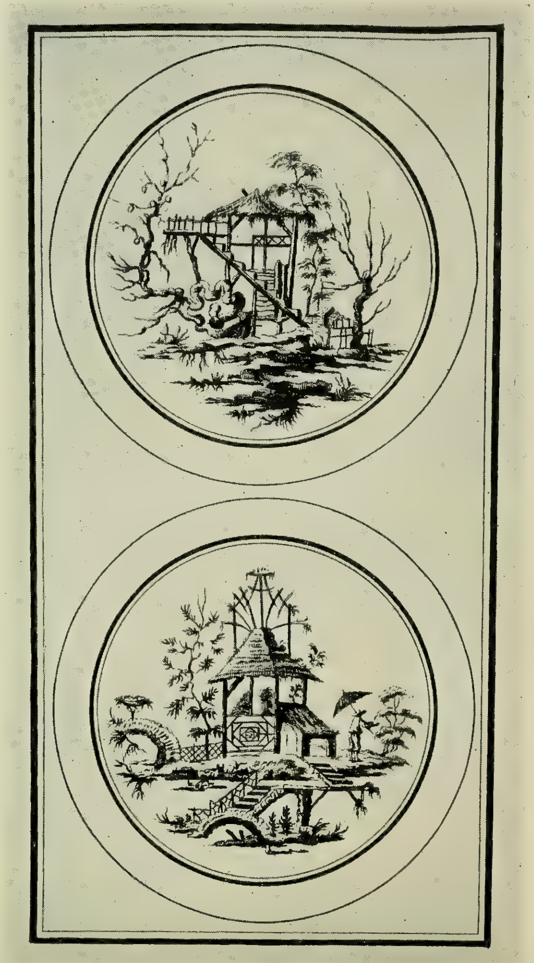

FIGURE 4. Two engravings of *Chinoiseries* by Jean Pillement (1728-1808).

for the purpose of discovering the secret, Edward Allgood (son of Thomas) repaired to Woburn in the disguise of a beggar, and, acting the part of a buffoon, he actually obtained access to the workshop, and by this means acquired the arts of making the *leys,* the principal ingredient . . ."[3]

It was not long after this that Bishop Pococke, during a visit to Pontypool, describes the decoration of the period (1750-55) which was of oriental designs in gold on a black lacquered ground. The arrival of Benjamin Barker as chief decorator marks the introduction of flower painting in a style then known as "Van Huysum" flowers.[4] These generally were applied on a deep tortoise-shell ground for which Pontypool was well-known.

In 1761 a family quarrel split the business, part of it, under the direction of Thomas and his brother Edward, and Thomas, his eldest son, being transferred to the neighboring town of Usk, as Allgood and Company. Another Thomas, possibly a cousin of the elder Thomas of Usk, continued in Pontypool. By this time imitators of Pontypool wares had begun to be styled "Pontipool Makers." They were located principally in Birmingham and Wolverhampton and began operations around the middle of the eighteenth century. Bilston was another center, such japanners as William Smith, Joseph Allen, and Samuel Stone being recorded as working there as early as 1709-19; on what sorts of pieces these early workmen applied their efforts is not clear. In Bristol the firm of J. Bartlett and Sons produced bowls and canisters, enriched with oriental designs in gold on green grounds, which were used in the display of their importations by members of the East India Company.

Meanwhile Benjamin Barker had left Pontypool, and "Billy" Allgood had engaged William Pemberton, a rather mysterious character known variously as "a good tinsmith" and "the best decorator of the Midlands," to replace him. Pemberton's actual rôle remains obscure. Financial success seems to have attended the ventures centering around Pontypool for at the end of the century trays painted with landscapes brought as much as fifteen guineas. Popular acceptance of the wares had reached such proportions that terms such as "round as a Pontypool waiter" (used in reference to very stout persons) were in general use. The esteem in which this painted metal was held is reflected in a speech given in 1790 by Sarah Siddons in which she praised the blue ground of Pontypool (which occurred variously as turquoise, peacock, and mazarin). Esteem of a more local character is indicated in an immoderately long set of verses composed around 1799 by Thomas Thomas, the publican poet of Pontypool. Space permits the quotation of only a fragment:

"The swelling urn its lovely blue displays,
And beauteous tortoiseshells are viewed on trays.
O'er brilliant lines your pencils oft were wont
To glide from narrow crimson to Stormont;
Your wreath to pluck, a host of daubers try
With gaudy glare to catch the unskillful eye.
But worth superior yet belongs to you;
'Tis yours to *lead,* 'tis theirs but to pursue."[5]

Fame from yet another source came to Pontypool *via* Thomas Barker, son of Benjamin, who for some time had been employed there in the decoration of certain pieces. He later went on to attain notability as "Barker of Bath," a painter of reputation. The works of other men of note were copied onto the centres of trays manufactured in the Midlands, paintings by such men as West, Morland, Bigg, and Copley.

But this glory declined during the early nineteenth century after the untimely demise of "Billy" Allgood. The widow Allgood did not particularly interest herself in her late husband's enterprise in Pontypool, preferring rather the less hurried rewards of a chandlery, a sort of Post Office, and other pursuits. At Usk the Allgoods had become extinct, the business passing into the hands of the Messrs. Pyrke, who specialized in black trays with gold borders. Though their work was not of great merit, they yet secured the order for the lacquered fitments of Apsley House when the Duke of Wellington received it from the Nation. They later occupied themselves, as did so many, almost exclusively with the decoration of *papier mâché* articles.

In the nineteenth century the Old Hall works in Wolverhampton became the center of the japanning business, employing at one time more than eight hundred people. It is probable, however, that these were employed in the production of *papier mâché* rather than tôle objects. It is possible that the invention, in 1834, of Gerard Barber of Bilston, that of transferring designs to trays, was applied to tôle (Fig. 13) in the beginning and later to the newly popular material. It is certainly true that this device assisted the decline of the art as objects could mechanically be produced by the tens of thousands where only hundreds had been possible before. Hand-work continued, however.[6]

Perhaps because French development of trade with the Orient lagged behind those of England and Holland, the art of lacquering was begun somewhat later than in England. It was certainly practiced in Holland, particularly at Zeist, near Utrecht, very early in the eighteenth century. It was from Holland, perhaps by way of Wales, that such objects were first introduced into France. Surely much Welsh lacquer found its way to that country. In 1744 Simon Etienne Martin was granted a monopoly for his *vernis* which he produced with great success for some years. The Martins were not the only innovators, however. Le Sieur Desforges in 1762 introduced a new varnish substance to which he gave his name. It was applied on copper. The French soon put lacquered metal sheets to a new and interesting use — as decorative panels for furniture.[7]

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[3] Quoted from the *History of Monmouthshire* in the *Art Journal,* 1872, p. 23-25.

[4] After Jan van Huysum (1682-1749).

[5] Quoted in the *Art Journal, op. cit.*

[6] A good chronology of style in the mid-nineteenth century along with notes on individual decorators is to be found in the *Apollo* for November, 1942, p. 137-139.

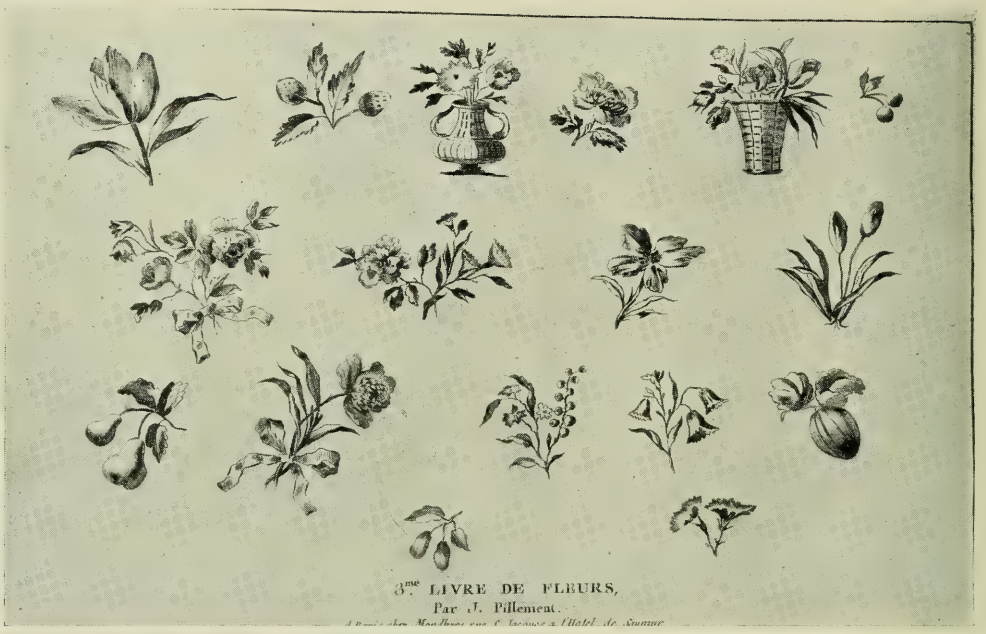

FIGURE 5. Group of flower and fruit subjects engraved by Jean Pillement.

Proof that *tôle peinte* was used in France in most lavish surroundings is found in a note from the *Vente du Mobilier de Versailles* after the Terror; here is mentioned a *cabaret* of Sèvres porcelain on a *"plateau de tôle peinte façon de lac."* During the Terror, Hubert Robert, the noted painter, is known to have decorated metal articles, during his imprisonment in the Conciergerie, which were exchanged for the requirements of life for himself and fellow prisoners.

A number of pieces of tôle were exhibited in 1799 at the first Exhibition of Industrial Arts in Paris by Citizen Deharme. They were greatly admired and no doubt encouraged the entry by other artists of their works in later exhibitions. Among them may be mentioned le Sieur Tavernier, Rue de Paradis 12, who exhibited in the *Exposition des Produits de l'Industries* held in the Louvre in 1819, and M. Pierre Lessard, Rue St. Denis 302, whose pieces found place in the Exposition of 1823. The latter specialized in lighting devices, and one may safely assume that among his entries the frequently encountered *bouillotte* lamp, a sort of shaded candle-lamp named for a popular card game, was represented. Tôle lighting devices were especially in vogue during the early nineteenth century in France; not only the *bouillotte* lamps but candle urns, sticks, and chandeliers are often represented in contemporary illustrations of interiors.

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[7] A reference from *Le Mercure* for May, 1770, indicates that one Sieur Clement was responsible for this novel practice, specializing in fruit and flower subjects.

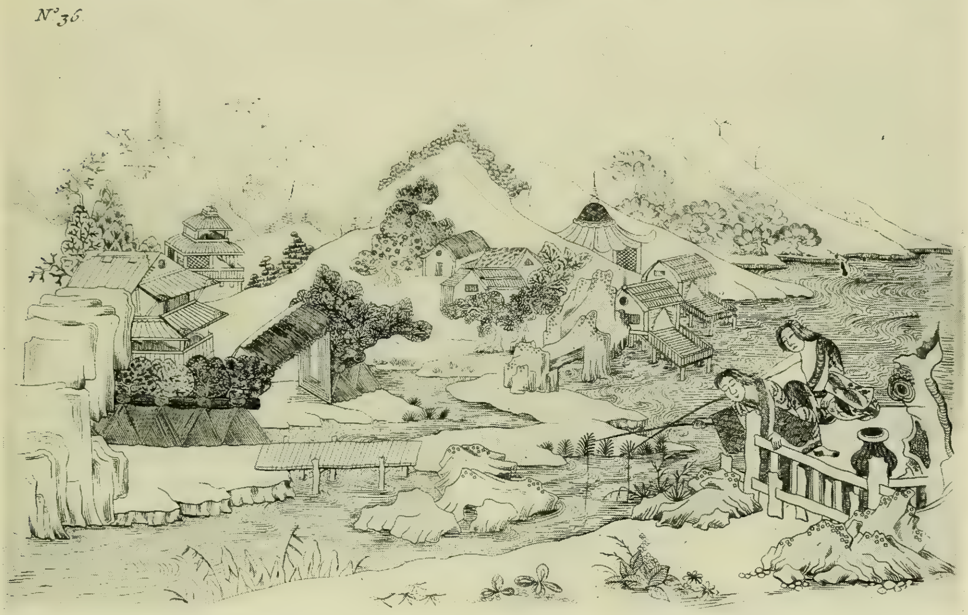

FIGURE 6. Oriental view engraved by Jean Antoine Fraisse (active 1733-1740) for his *Livre de Dessins* . . . of 1735.

Of all the French tôle-makers, perhaps the most favored was the establishment variously given as *Au petit Dunkerque* and *Du petit Dunquerque*. It flourished in the late eighteenth century in the Faubourg St. Honoré. One of its specialties was decoration in grisaille on light grounds.

The Dutch, while employing the shapes characteristic of their metalwork, depended heavily on the English and French for their painted design and even for the painting itself; it is known that pieces were sent from Holland to Wales for decorating. French designs current at the end of the eighteenth century are not infrequently found on pieces of characteristically Dutch shape. To a lesser degree, tôle was produced elsewhere in Europe, in Italy, and, around 1800, at Brunswick in northern Germany.

Reference has already been made to the composition of true oriental lacquer and to the early attempts in Europe and England to imitate it. Such early substances were, of course, developed primarily for application to wood, and the technique of tôle proper demands some exposition.

We have a little first-hand information concerning the metal stocks used by the Allgoods. A local account book contains an entry mentioning Usk black plate and tin taggers in sheets. "Taggers" apparently refer to thin sheet iron, tinned in this instance. Such material was used in the construction of the bodies of small articles such as coasters, tea caddies, snuff boxes, and the like. The "black plate" must surely have been

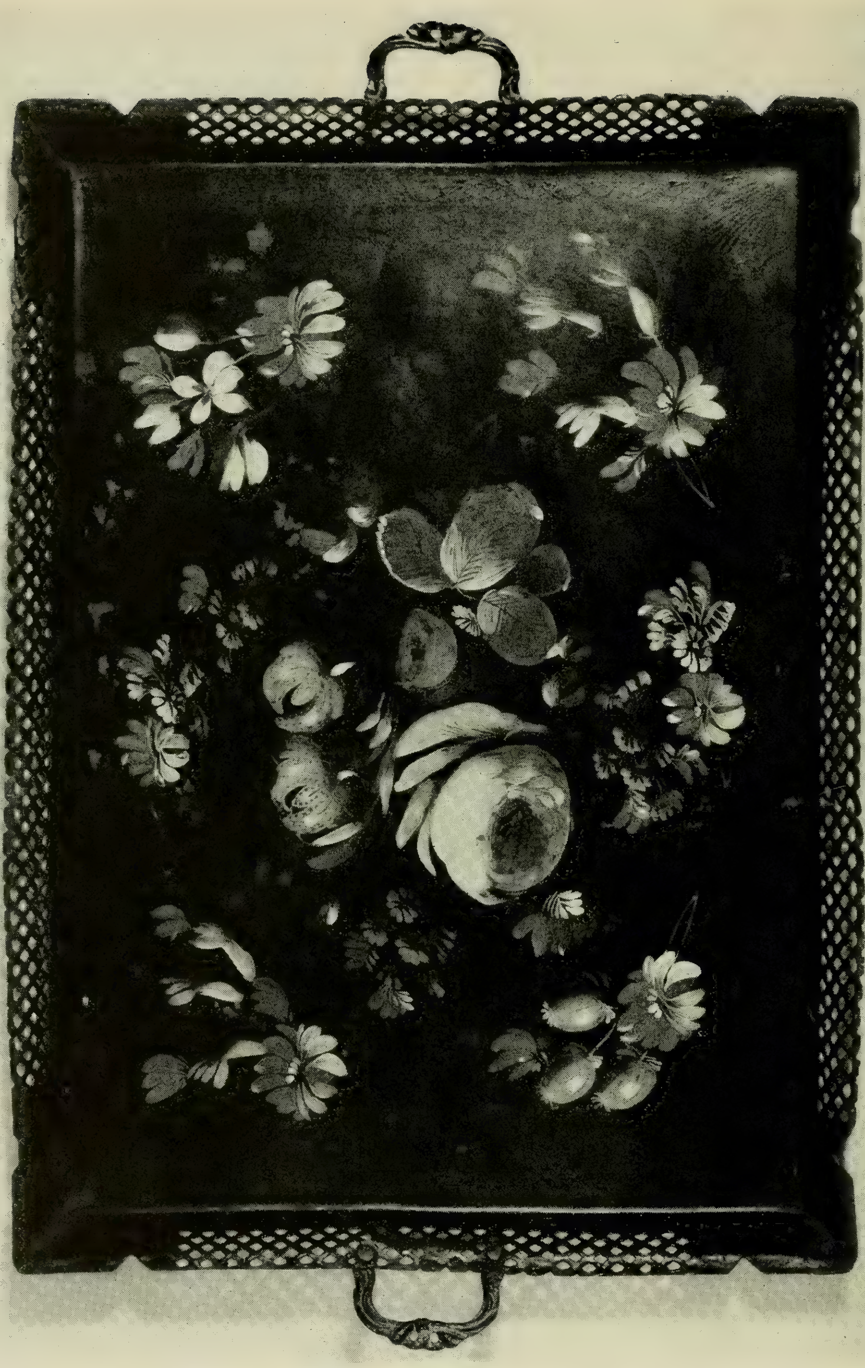

FIGURE 7. Tôle tray. England, Pontypool, about 1770.

used in the production of larger objects such as trays, depending by their nature on the inherent strength of the material used. Both the taggers and plates were undoubtedly rolled, as this process provides, with its repeated heatings and passages through the mangles, the smooth and even surface required for the successful application of lacquer.

Unlike later trays, which were formed by dies, the edges of early examples were turned up by hand and riveted at the corners. This corner riveting is thus a dependable indication of early date and is especially characteristic of the work done at Pontypool and at Usk during the middle years of the eighteenth century and shortly thereafter. The piercing of the borders was, of course, necessarily interrupted at the corners to allow for this treatment.

Pewter was another body material in use in the English Midlands, though its appearance seems to have been later than the ferrous stocks thus far noted, such objects as coffee urns and chestnut jars being manufactured in this metal. For the most part these date from the years around 1800, many coming from the hands of Pontypool decorators. It is not unusual to find a combination of metals employed in the composition of an individual piece; frequently mounts, ring handles, knobs, masks, finials, and galleries are of some other material than the body of the article. Though extended use of pewter is not seen in England until the final years of the eighteenth century, earlier experiments, at least, are known to have existed, for in 1622 it was illegal to paint or gild this metal. Such protective measures do not seem to have been thought necessary in the case of Sheffield plate, for strangely enough even this was occasionally decorated.

The French made use of the stocks noted above in the manufacture of their japanned wares but, to a much greater extent than the English, used copper. As its shapes were frequently formed by the hammer, the technique generally associated with silver articles, its surface was by no means ideally suited for the application of lacquer. Objects of this nature still existing often exhibit a disintegration of the surfaces displayed in the flaking off of the coats of ground color. On such pieces, following a familiar French taste, are often found gilt bronze mounts of high quality and great refinement, quite in contrast with brass, pewter, and lead mountings of English and Welsh objects.

Aside from the uses of decoration, the japanning of metal, particularly iron, served the very practical end of preventing oxidation. Iron stocks could never have been used in the production of domestic utensils without a protective coating to preserve it from rust; even tinning proved an insufficient measure in this respect, providing protection for only a relatively short length of time. Thus Allgood's discovery of a comparatively waterproof, heat-proof covering actually made possible the application of the products of the Hanbury mills to minor household uses never before practicable. Allgood's varnish was a fired substance which acquired a fine smooth surface and considerable hardness in the oven. It apparently was composed of a mineral oil mixed with pigment and a sludge of some sort, this last called "lees" (the "leys" of Archdeacon Coxe), the improvement of which drove Edward to such singular extremes of enterprise. Today it is known that simple refined asphaltum toned with varnish will fire satisfactorily.

The Allgoods quickly learned the technique of the tortoise-shell ground found on their early trays. This effect was achieved by application of patches of silver leaf applied to the surface to be decorated (the mere tinned surface sufficing on smaller pieces), a coating of red pigment, and the wiping out of lights in the final coatings of lacquer. Thus were brought about the "beauteous tortoiseshells" viewed with such loyal pleasure by Thomas Thomas.

The French are noted for the distinction of color and quality of surface of their japanned grounds. But perhaps the most striking effects got by them were through the use of *vernis Martin,* that remarkable transparent varnish in which are, in some instances, suspended millions of specks of gold metal. These varnishes occur in a number of hues, many of which are really gem-like in quality. They all appear to be of a considerable delicacy and were employed primarily for the decoration of the exteriors of vessels, *verrières,* or glass-coolers, ice cups and buckets, *câche-pots,* and the like. Certainly they lack the durability of the more plain solid grounds.

The gilding of tôle was never done with gold paint, but always either with metal leaf or metal powders applied to previously sized designs. Use of bronze powders of different hues on a single piece was developed in 1812 by Thomas Hubbel of Clerkenwell. The technique was popular from the year of its invention until about 1830. Complete pictures could be and were applied to trays with this method; at the very least, they are striking. Silver leaf can be made to give the effect of gold by toning it with a transparent yellowish lacquer, a fact much appreciated in the early days of Pontypool.

From the late years of the seventeenth century onward through the eighteenth the amateur devotee of the arts of japanning found himself with no dearth of encouragement or instruction. As Stalker and Parker were to exclaim:

"No amorous nymph need entertain a Dialogue with her Glass, or Narcissus retire to a Fountain, to survey his charming countenance, when the whole house is one entire speculum."

During the eighteenth century a number of books were issued which professed to reveal the true secrets of successful japanning; some actually contained really practical information which can easily be followed today. Among these is Robert Dossie's *The Handmaid to the Arts* which appeared in London in its second edition in 1764. In it are found full instructions for the japanning of metals with the composition of all substances used in the various processes carefully outlined. The rivalry of English japanners with the French is noted with reference to the alleged inferiority of the Parisian manufactures and the superiority of those of Birmingham origin. Then follows a series of instructions for the preparation of various colored grounds including the fired "common black" and fired tortoise-shell.[8] Pigments for decorating are explored and complete instruction in the arts of gilding offered. Gilding here is accomplished by reducing gold or "Dutch" leaf to powder by grinding it with virgin honey, recovering the powder through washing, and applying it dry upon a size.

Nor was there a lack of sources of design for amateur or professional, either in France or in England. The designs appended to Stalker and Parker's *Treatise* have already come under notice. They are entirely in the oriental vein and the purpose of each is clearly indicated, designs for even such things as the backs of brushes being included. *The Ladies Amusement*[9] contained a great many more designs from the hands of a number of men; the most interesting, perhaps, are those in Pillement's characteristically sophisticated style. Again, as in almost every aspect of the decorative arts, the influence of the brothers Adam is felt in the classical mode, particularly in the shapes of vessels. It is not unusual to find fairly naïve flower or genre subjects imposed on the surface of a classical derivative, such being almost general as a late eighteenth century European phenomenon. Flower subjects

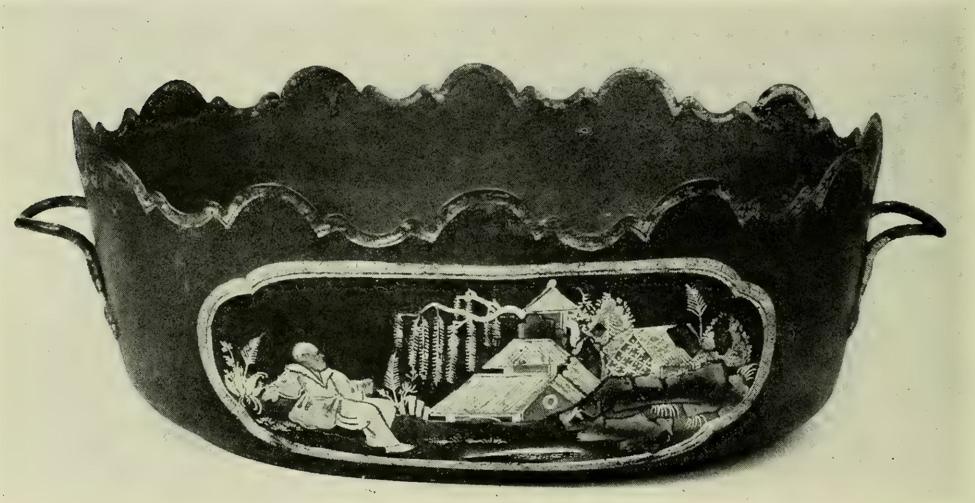

FIGURE 8. Tôle *verrière*. France, about 1765.

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[8] Interestingly enough, a translation of the instructions for the preparation of these fired grounds appears in the French *Secrets concernant les arts et métiers*, Paris, 1790, vol. II, p. 825-827.

[9] *The ladies amusement or whole art of japanning made easy;* London, about 1760.

in themselves are well represented in contemporary compendia as well as in the exhibited works of the outstanding floral artists of the times. And finally, in England as well as in France, designs were freely adapted from actual objects imported directly from the Orient.

In France, Pillement himself published collections of engravings of his designs of which a large proportion are to be found in the Cooper Union Museum (Figs. 4 and 5). Others did the same. They include not only the familiar oriental fantasies, but flower pieces, birds, and other classes of material. Shortly before the middle of the century le Sieur Fraisse[10] published his important and fascinating collection of oriental views and subjects (Fig. 6). Previously, the brothers Martin had followed the vogue for *chinoiserie* in their labors.

Attention has already been called to the fact that designs were frequently adapted from, and even occasionally executed by artists of note. The centres of many large trays of the period 1785-1810 bear versions of well-known paintings by established masters, sometimes taken directly from the original, more often adapted from some published engraving or mezzotint. Decorative painting in general was in great fashion in the late eighteenth century, and the skill of many renowned artists was applied to this work. It is perfectly possible that important pieces of tôle were actually painted by such persons as those associated with the workshops of the brothers Adam or their followers.

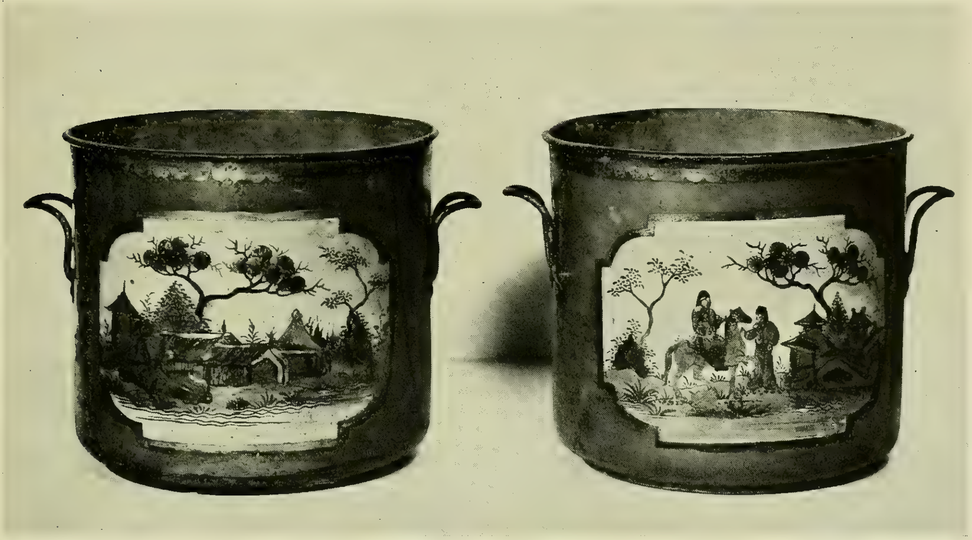

FIGURE 9. Pair of tôle *câche-pots*. France, about 1780.

As one would expect, tôle-painting of the early nineteenth century continued to depend heavily on the classic arts for its inspiration. The involvements of the heroic figures of antique mythology frequently found place on garnitures of vases, on trays, and vessels of many types. Of course the technical merit of these pieces varies with the skill of the individual decorator from the wholly admirable to the downright crude. Sources of such design are myriad and it would seem point-

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[10] To be found in the Museum Print Room in a later edition furnished with a false title page: de Devonhire; *Recueil de differentes fleurs et figures chinoises;* Paris, Mondhare, about 1770.

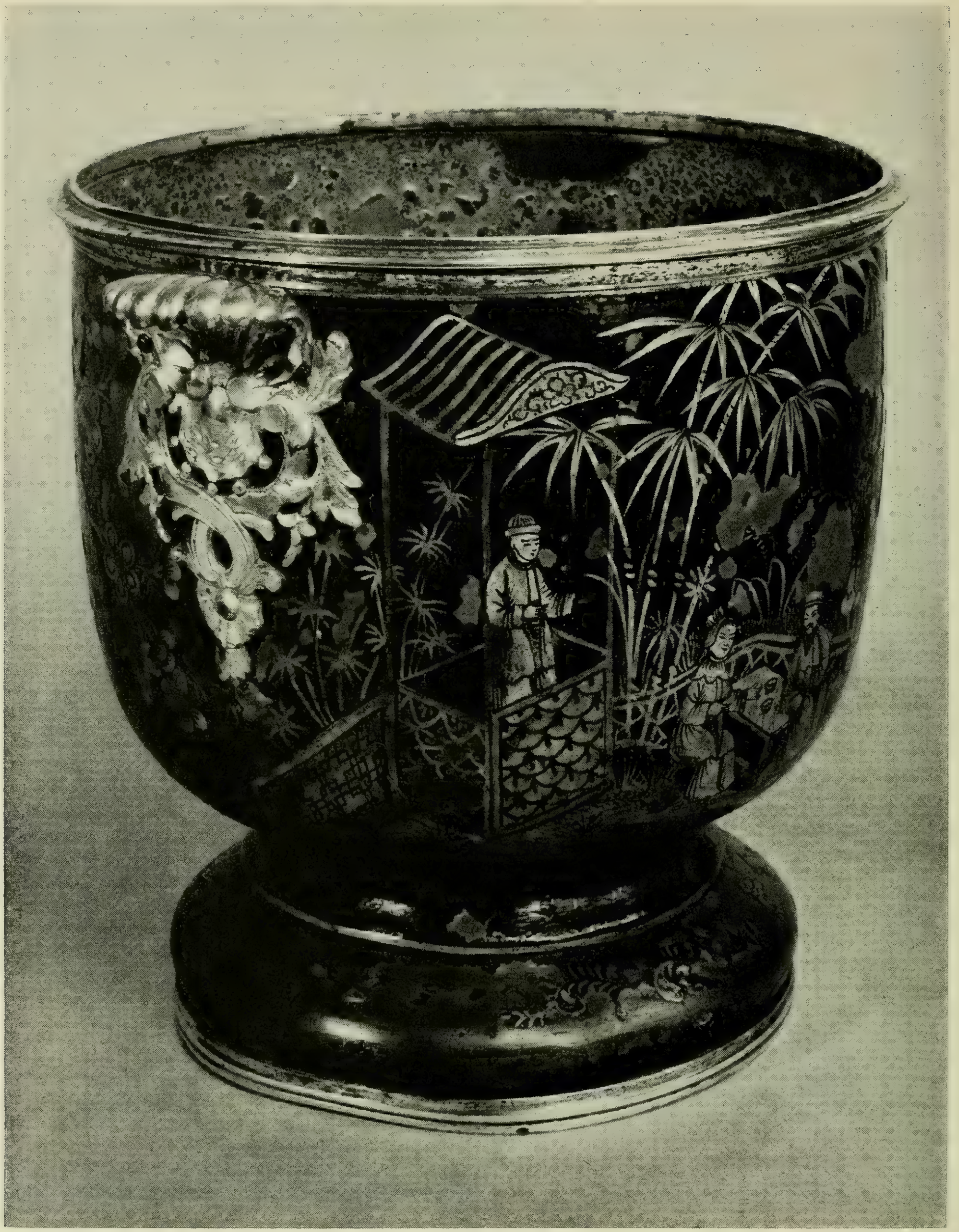

FIGURE 10. Tôle *câche-pot* with gilt bronze mounts. France, about 1750.

less to enumerate them. Percier's *Recueil*[11] will serve as one example.

Another class of decoration popular during the decades following the beginning of the nineteenth century is the genre scene. To this group belongs the work of Thomas Barker (1769-1847), already mentioned, whose rustic views of cottages, countryfolk, and animals animate with such favor the classicistic shapes on which they were applied. His painting is not confined in panels but occurs in vignette on the pieces it adorns. Further rustic compositions by such painters as George Morland were freely adapted for use on tôle pieces. Historical themes were also explored in tôle as they became popular in painting. Benjamin West's *The Death of Wolfe* was popularly used as an example of English work; in France, scenes from the campaigns of Napoleon were executed as the centre-pieces of trays.

Having in mind the foregoing brief historical and technical notes, we may begin our examination of the objects in the Museum's collection. It is always a considerable delight to come upon the physical realizations of what in written analyses can at best be interesting abstractions. For the seeing of the objects themselves brings into life the remarks made upon them and vitalizes the processes of understanding and appreciation upon which their enjoyment depends. Certainly there is as much to enjoy in this group of things as there is to learn; as in every collection of merit among the decorative arts, admiration of the vitality, the skill, and the imagination of the individual artist increases with each step through the display.

Among the earliest examples in this group of tôle pieces are two trays[12] from the factory supposedly located at Trosnant, in Pontypool, of the period 1760-70. They are excellent examples of the "Van Huysum" floral style, with their polychrome designs superimposed on the deep tortoise-shell ground developed so successfully at this center. The flowers, comprising roses, lilies, and a number of others, are executed with great dash, and though this quality is brought about perhaps at the expense of detail, the rapid brush work is admirably suited to the decoration of the flat tray surface on which it is seen. There is a union between the shape of the tray and its decoration, the two combining to form a single object which can be appreciated immediately as a whole and complete thing, rather than as an example, first, of the painter's, and then of the metal-worker's art. There is a great deal of strength in the simplicity of the edges and their piercing. The corners, defined by deep notches, are unpierced to provide substance for the riveting which is so characteristic a mark of work of this origin and date (Fig. 7).

A bit later in period is the cake basket[13] with scalloped edge and scrolled wire handles. The decoration of this piece is somewhat similar to that of the trays just described and sadly is much disintegrated. A valuable lesson is to be had from just this fact, however, for the losses of the surface reveal, beneath, the coating of red pigment which plays so important a rôle in the structure of the tortoise-shell ground.

Turning to France, a pair of *verrières*,[14] decorated with raised *chinoiseries* on a deep buff ground, claims our attention. These peculiarly shaped vessels, with their notched rims, were intended for the cooling of glasses, suspended upside down about the edge, in ice. Representations of them in use are visible in a number of the popular colored engravings of the period illustrating the intricacies of the indoor existence of the last quarter of the eighteenth century. Though with age the ground varnish has acquired an obscuring crackle, enough of its original nature remains to demonstrate the depth and luminosity of the original. The charming landscape with figure which composes the decoration of the side illustrated (Fig. 8) is a good example of European fancy at work on Oriental themes. A landowner is seen gazing with satisfaction, not unmixed with puzzlement, on his holdings which are marked by rustic and somewhat impractical opulence. The colors, heightened by a rich use of gold, are eloquent of that peculiar conjunction of softness and vividness which characterizes pieces of this sort. This is only one pair of a number of such examples.

Also decorated with *chinoiseries*, but this time on a ground of opaque Chinese red, are a pair of *câche-pots*.[15] The nature of the varnishes used on these pieces is in distinct contrast with the translucent materials employed on the *verrières* described above; the quality of the effect here depends solely upon the excellence of the hue and finish rather than upon depth and translucency. The French excel in their grounds, a success visible in these and other objects of the class. The charm of the scenes given need hardly be commented on. On the right, in a shaped gold enframement, a rider seated on an amiable spirited horse is greeted by his servant who has just emerged from the dwelling in the background. The other scene is more simply a group of buildings set among trees by the borders of a stream.

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[11] Percier, C. and Fontaine, P. F. L.; *Recueil de décorations intérieures . . .*, Paris, Les Auteurs, 1812.

[12] 1915-16-14A and B.

[13] 1914-21-4.

[14] 1912-18-17A and B.

[15] 1907-19-5A and B.

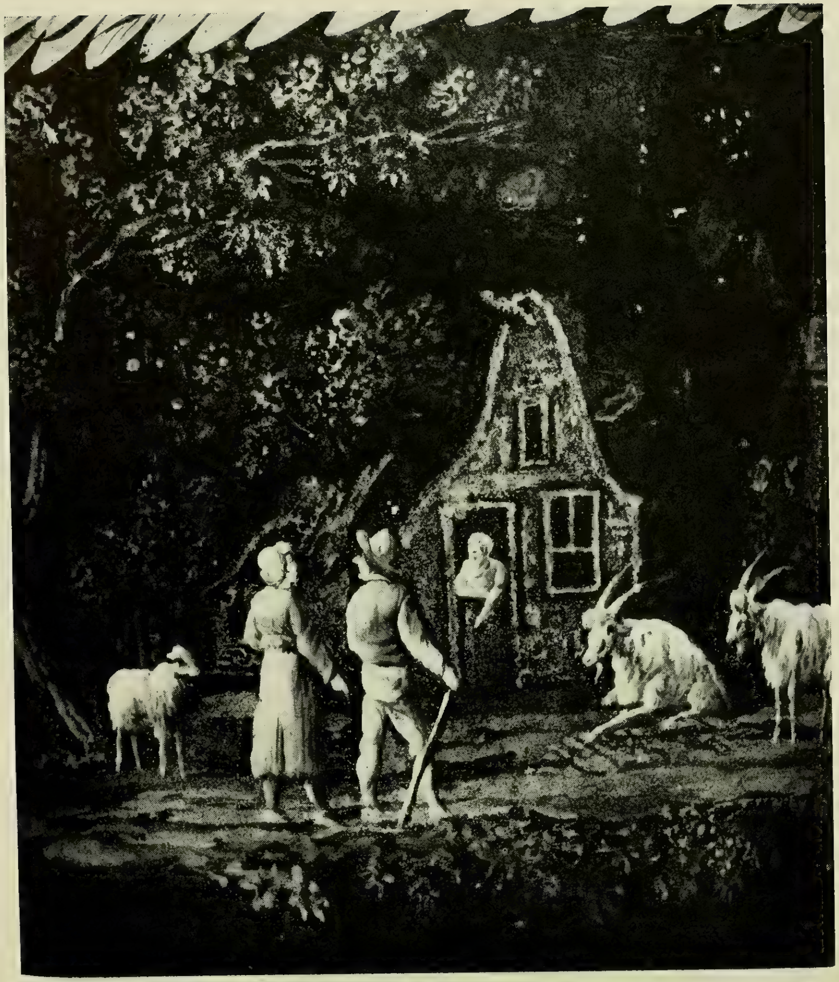

FIGURE 11. Painted detail probably by Thomas Barker.

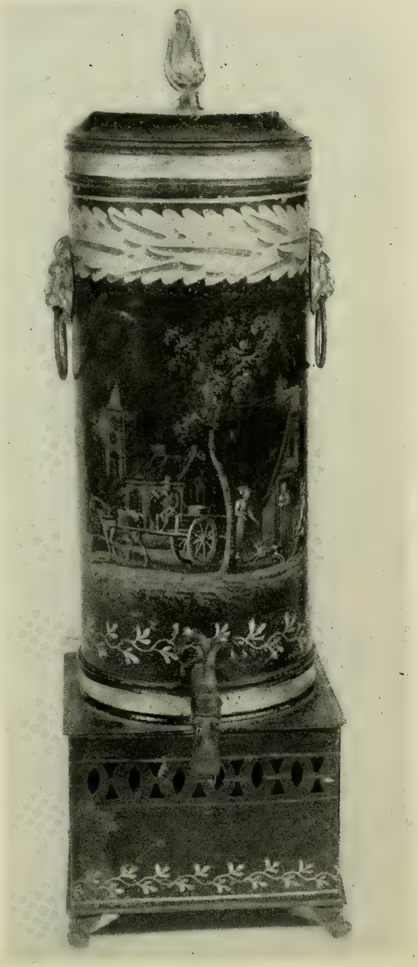

FIGURE 12. Tôle coffee urn. Probably painted by Thomas Barker. England, Pontypool, about 1800.

Additional fantasy is given to the setting by the unrestrained use of color in the raised foliage; this is a tree which bears red, blue, and greenish-buff leaves deftly picked out with gold, certainly an unreal though engaging conceit (Fig. 9). Attention should be drawn here to the quality of design and execution exhibited on another *câche-pot*[16] of this series, one with a superb blue ground.

A further noteworthy pair of similar objects is the pair of very small *câche-pots*,[17] again with the familiar fanciful oriental enrichments. It is in these that the nature of the French translucent varnishes may best be observed, and the unique French technique of incorporating into the varnishes themselves minute gold-colored metallic flakes, lending to the material a most wonderful richness and sheen. Especially effective is the brilliant ruby used as a background to the scenic design.

Very coarse in drawing and crude in conception is another *câche-pot*[18] which is, however, interesting from a technical standpoint. On a plain polished black ground are pencilled a most undistinguished series of pseudo-Chinese derivatives. The decoration is applied in this case over a hammered-up copper vessel which has a great deal of elegance of form. Here the accusation levelled by the English, that French japan was liable to chip and flake, is certainly deserved for in many areas very little remains of the varnish layers. The singularity of the object is further emphasized by the quality of the gilt bronze mounts which are in the style of the mid-eighteenth century. The conclusion is almost inescapable that this is a piece from the hand of an enthusiastic if somewhat ungifted amateur, for the mounts and materials possess every aspect of quality the lack of which so distinguishes the decoration (Fig. 10). Perhaps it was English work of this nature which moved Walpole to his flattening utterance.

Possibly the finest and certainly the most impressive piece of painted tôle in the collection is a very large oval English tea tray with a most satisfying apple-green ground[19] (Fig. 1). The shape, a graceful oval with a straightsided, canted rim deepened at the ends to admit of single piercings for handles, is familiar in the last decade of the eighteenth century. This evidence of its period is supported by the painted reserve in the centre, a decorative painting of the highest possible quality within its type. In a classical setting, a returning warrior is about to awaken a lightly-clad woman. This is without doubt a representation of an episode from some familiar tale of classical mythology, perhaps that of Peleus and Thetis. The style of the work speaks strongly of the Royal Academy, and while it is not possible to give it with certainty to any one artist, it certainly stems from some hand close to the circle of Angelica Kauffman. The piece is fortunately in excellent preservation and stands as a high point in the art of painted tôle.

The Museum possesses two trays of slightly later date, one painted with a three-quarter figure of a woman musing over a letter[20] (Fig. 2), the other with a lady seated in a summer garden[21]. The painted medallions of both of these trays are in all probability free adaptations of the published engravings of well-known artists. The workmanship, while pleasing enough, is not of an especially high order, surely not of the quality of the example presented above. Representations of late eighteenth century English ladies in attitudes of domestic preoccupation or merely in attractive contemplation seem to have enjoyed a vogue as subject-matter for tea waiters. In these cases immediately before us the elements of decoration most worthy of our attention are the finely painted and gilt borders which are admirably executed with great sureness. These trays are, of course, commercial productions entailing the skills of the metalworker, the layer-on of grounds, the painter and the gilder.

A pair of French *câche-pots*,[22] similar in shape to those already discussed, is decorated after the classical mode simply in black on a reddish ground with nymphs astride fabulous sea horses. During the latter part of the century the fashion for *chinoiserie* found competition in a great interest in the classical and the classicistic, of which these vessels are examples. The scheme of colors suggests at once that discovered in ancient vase painting, though, of course, in both technique and expression these flower-pot holders have little to do with the older art. In themselves they have great charm as reflections of a classic revival.

In the next group which we are to discuss, the influence of classical antiquity is very strongly felt from a number of aspects. The basic shapes of things are in many cases dictated by antique objects or by ornamentalists depending directly on the antique for their impetus. Decorative borders stemming from classical modes, the classical finial, the urn, the mask — all find place in the productions of the English Midlands around 1800-1815. The really amusing thing about the class of tôle coming from Pontypool

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[16] 1931-86-150.

[17] 1907-19-1A and B.

[18] 1931-86-151.

[19] 1912-18-31.

[20] 1912-18-35.

[21] 1912-18-34.

[22] 1907-18-24A and B.

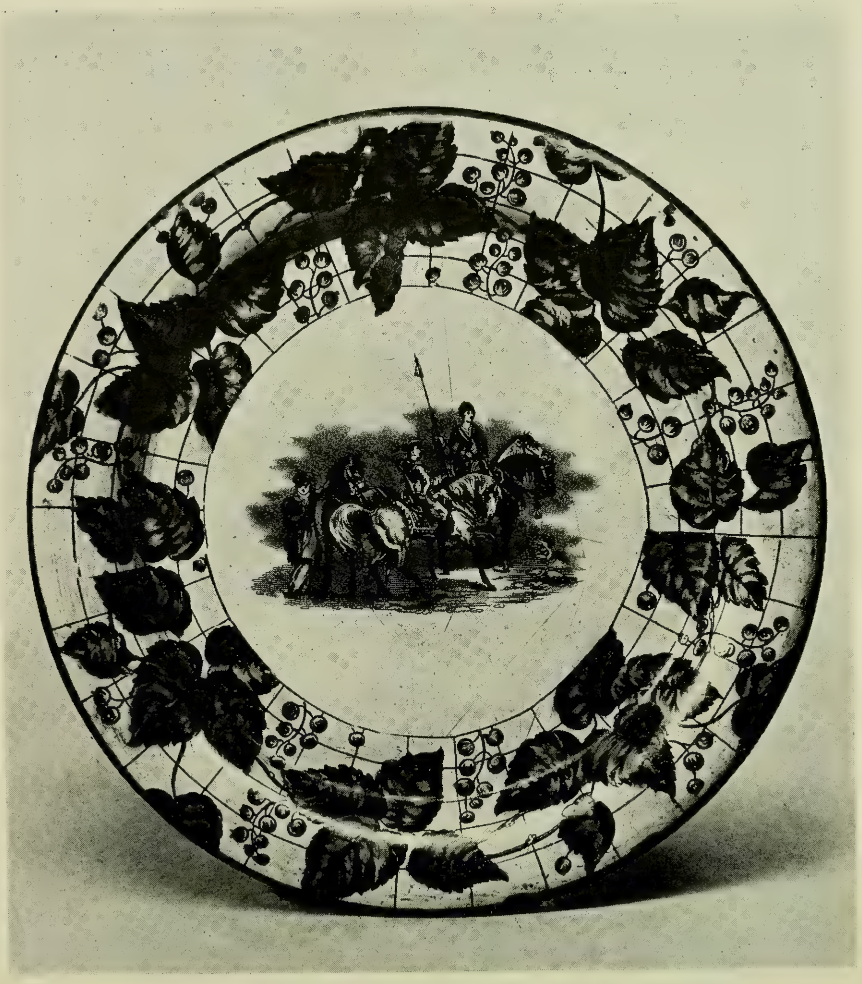

FIGURE 13. Tôle plate. England, probably Bilston, about 1840.

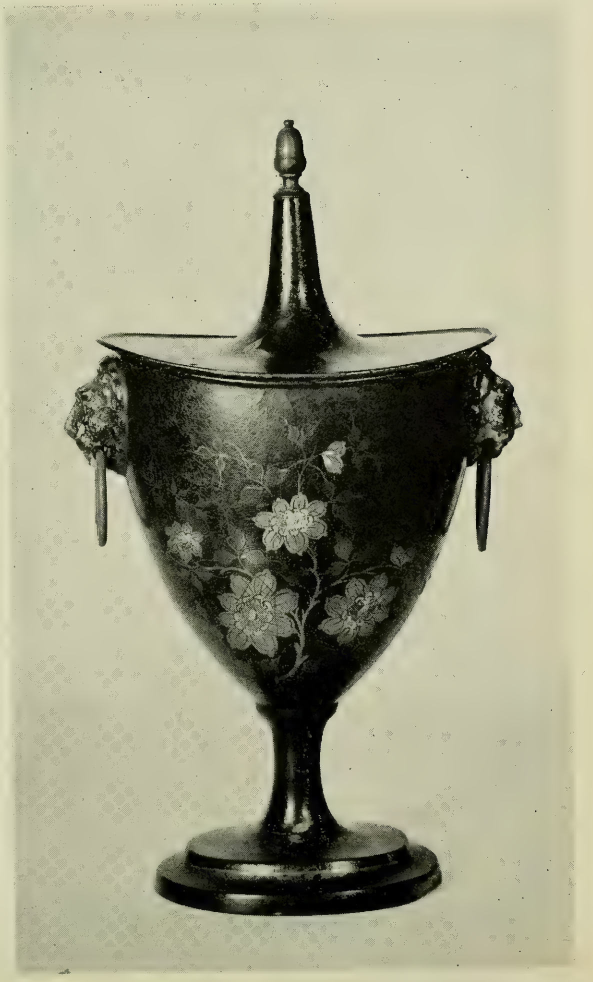

FIGURE 14. One of a pair of tôle chestnut jars. England, Pontypool, about 1800.

at this time lies in the superimposition on the shapes and the association with the other classicistic elements of perfectly representative English rustic paintings of the period. In this connection we are apt to think especially of Thomas Barker who specialized at this time in such painted embellishment, before proceeding to the firmer ground of fame. The Museum is fortunate in the possession of a small number of pieces the painting of which may be assigned to this artist. The most important of this group are two coffee urns[23] decorated in polychrome and gold on black grounds. The subjects represented are rustic villages or farms peopled with countryfolk and enlivened with domestic animals. On one, a man conducts his horse-drawn cart through the tree-lined streets of a village and past a cottage door at which a group are engaged in conversation, a dog barking at their feet. The village church is seen in the background. All this is in vignette under a debased classicistic border in toned gilding from which spring two lion masks bearing ring handles. The top is lifted by means of a gilt flame finial and the whole cylindrical body is supported on a pierced squared stage in which provision is made for the heating lamp (Fig. 12). The second, in the shape of a true urn and supported on three scrolled legs, bears a view of a peasant's cottage in front of which stand a pair of goats, a lamb, and a group of people (Fig. 11). This whole piece rests on a shaped stand fitted with a pierced ring to hold a lamp. Where the first was constructed of tinned iron sheets with brass masks, this one is entirely of pewter. A third coffee urn is closely similar in ornament and decoration, but the painting is probably by an artist close to Barker. Thomas Barker is surely responsible for the decoration of a bread tray belonging to this group.[24]

Scenic painting also came into use on tôle pieces of the early French nineteenth century. In the Museum's collection are two extremely handsome squared flaring vases,[25] each set into gilt winged lion feet disposed upon a square socle (one is illustrated on the cover). As one would expect, the scenes painted on their surfaces are scarcely rustic, representing classical landscapes enriched with classical architecture and enlivened with classical figures. The vases are very pleasing in color and the conjunction of gilding with red marbled bases is most effective. Red and gold was, of course, a favorite combination of the French Empire style, and we find it again on a pair of smaller unmounted vases[26] of similar shape. The decoration on these is entirely gilt and is composed of borders and trophies.

Quite unlike the preceding are a pair of painted pewter chestnut urns[27] of about the same period and of a type generally attributed to Pontypool or associated factories. The decoration is more characteristically Dutch, however, and is composed of a series of large, rather regular blossoms set on an irregular arabesque of stems and leaves. The shape is that of a simple antique urn, the body embellished with a pair of lion mask ring handles and the pointed top terminating in an acorn finial (Fig. 14). These chestnut jars were used during holiday seasons to hold chestnuts hot from the fire; at other times they served as purely decorative mantel garnitures. They invariably occur in pairs, of which the Museum possesses two.

The mid-nineteenth century in England saw a return to *orientalized,* rather than oriental design. The mode frequently was called Indian; its characteristic lack of consistency and restraint were well exemplified in the Prince Regent's Royal Pavilion at Brighton. An example in tôle is seen in a large rectangular tray[28] with rounded corners, decorated in gold and colors on a black ground. The piece is not without quality though it does not bear comparison with objects of the great periods of the craft. It exhibits the characteristic random choosing of elements, which bear little relation one to the other, to fill space. Exotic birds, fountains, and never-never flowers were all popular devices and are here used (Fig. 15). This tray is a valuable example technically because we find on its surface several shades of bronze-powder gold toned with glazes to heighten or mute their effect, by this time certainly not a new idiom, but one in which the commercial houses had become exceedingly fluent.

This use of several varieties of bronze powders, however, is best demonstrated on a French tray of about 1830 bearing the scene, *Napoleon at Frankfort.*[29] Aside from a very restricted range of colored glazes (mainly umbers and other earth colors) the entire rather complicated scene is accomplished wholly in gold of several types. Such historical subjects were widely used on trays; this one is signed: *Auger — fils,* referring most probably to Adrien Victor Auger (1787-?), a Parisian painter of historical and genre works. The drawing of the figures is of considerable merit and the composition as a whole is well conceived (Fig. 16).

These notes by no means complete a list of the

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[23] 1912-18-5 and 1912-18-3.

[24] 1912-18-25.

[25] 1912-18-7A and B.

[26] 1912-18-8A and B.

[27] 1912-18-6A and B.

[28] 1931-80-96.

[29] 1912-18-33.

Museum's collection, which includes in addition a number of objects, both small and large, which will prove of interest to the visitor. Among these are two coffee urns with the pear-shaped bodies so typical of Dutch taste, a pair of delightfully painted coasters, and a group of other pieces of greatly varying character.

The collection will be found in the Museum's metalwork gallery arranged for the pleasure and convenience of the visitor on a series of nine shelves. A label bearing a brief description of each piece serves each shelf. In addition to the objects themselves, there are available to those interested the very extensive facilities of the Museum's Section of Prints and Drawings where original sources for designs for japanning, some of which have been mentioned above, may be consulted at leisure. Further, the excellent resources of the Museum Library are easily at the call of student, expert, or casual onlooker, and provide an added richness of material for those who may desire to pursue additional investigation into the subject of tôle and its sister decorative arts.

JAMES I. RAMBO

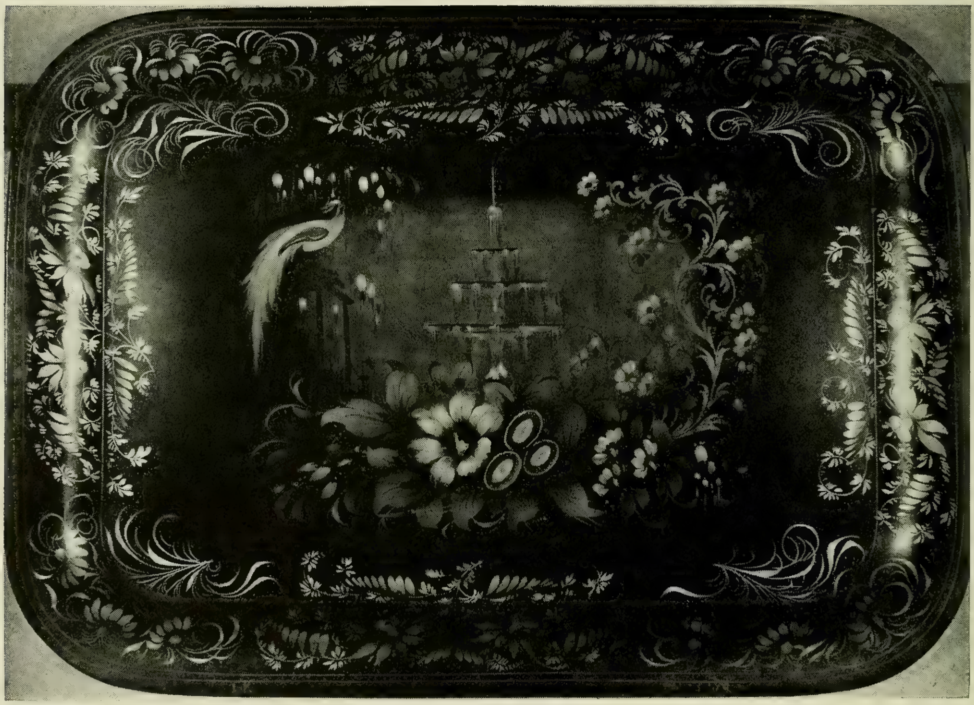

FIGURE 15. Tôle tray. England, about 1860.

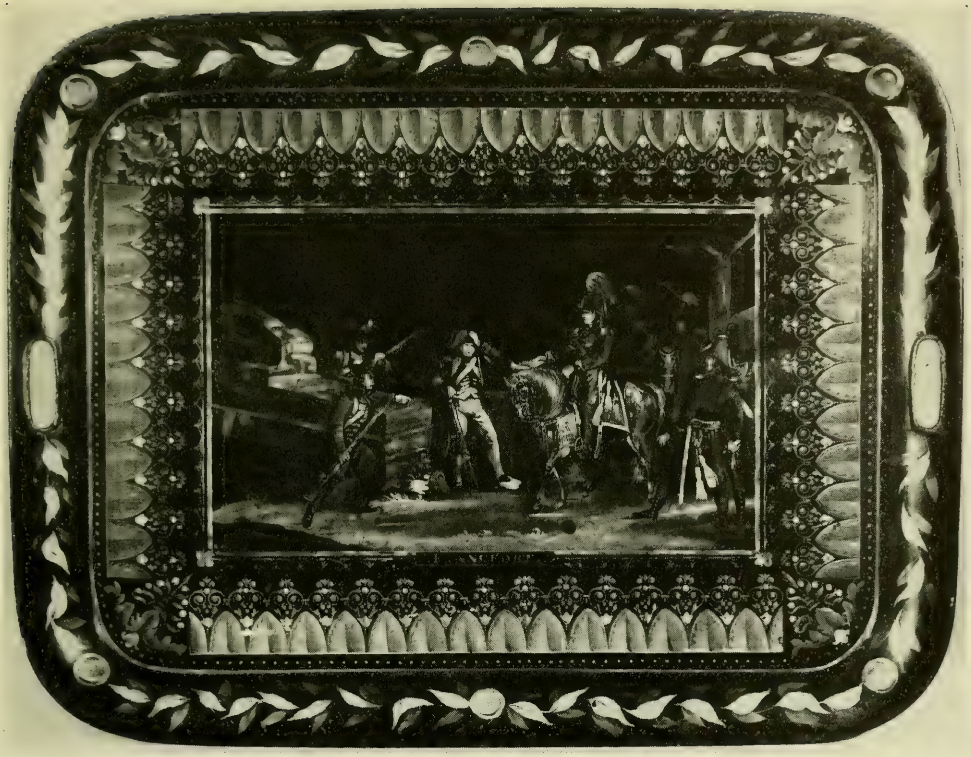

FIGURE 16. Tôle tray painted with a representation of Napoleon at Frankfort. Signed: Auger-fils. France, probably Paris, about 1830.

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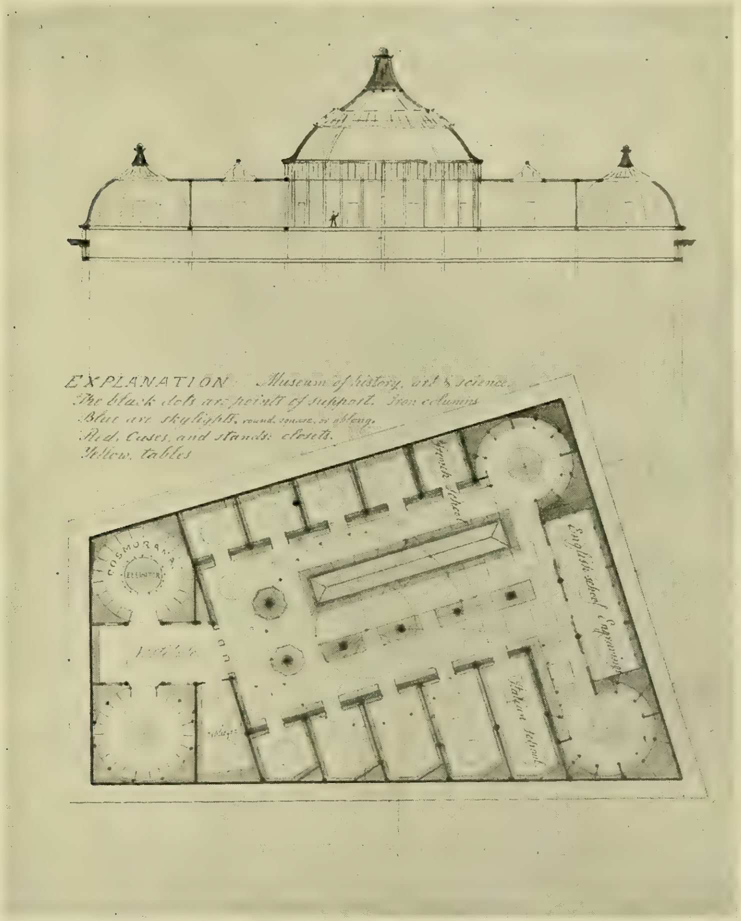
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CHRONICLE OF THE MUSEUM
FOR THE ARTS OF DECORATION
OF THE COOPER UNION

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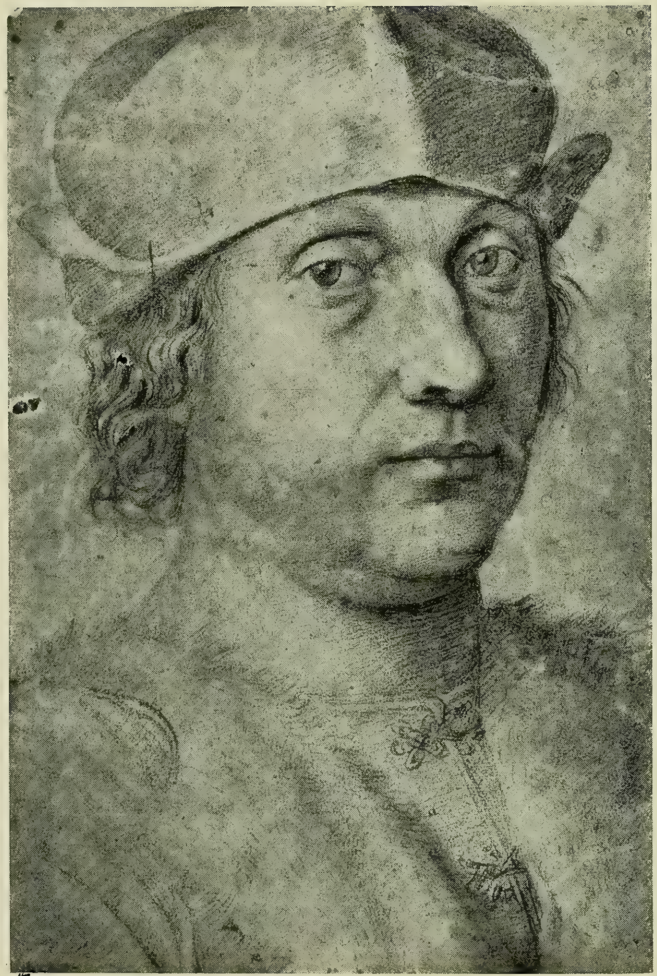
AN INTRODUCTION TO THE COLLECTION OF DRAWINGS

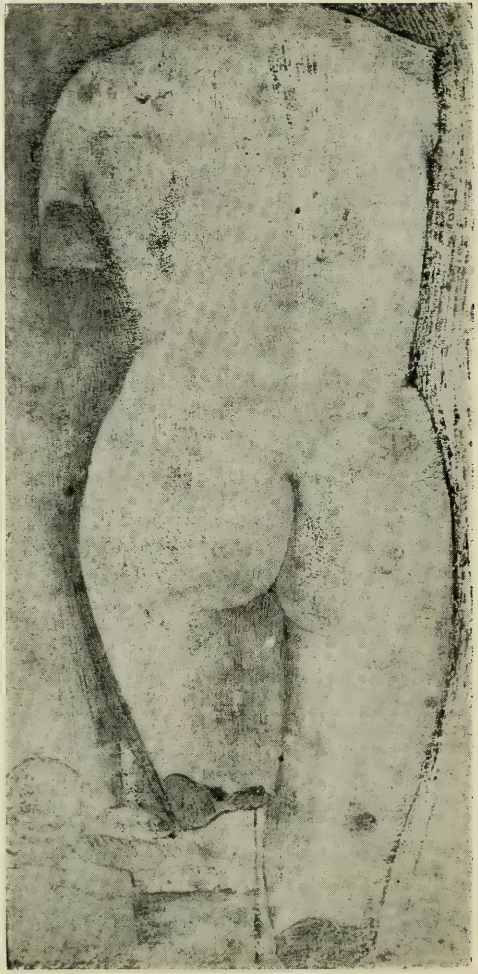
ALTHOUGH FOR FIFTY YEARS the Museum has steadily maintained on display several thousand drawings, with other thousands accumulating in reserves, the richness of its graphic collection seems relatively unknown. Up to the present time it has not been possible to publish any catalogue of drawings;[1] indeed, it is little more than a decade since a specific staff position was created for the care and study of this section of the Museum's holdings. While the detailed examination of this material has by no means been completed, it has been carried far, so that it is now possible to present a brief survey of this unusual accumulation.

The history of the assembling of the drawings is in itself worthy of recording. Generous gifts have accounted for much, purchases have brought more; and the fact that the Museum has never had any assured annual income for the purchase of works of art is a further source of admiration for the accomplishment of the Museum's founders, the Misses Hewitt. Already in 1900, less than four years after the formal opening of the Museum, these ladies were negotiating for the collection of Italian drawings formed by Cavaliere Giovanni Piancastelli, Director of the Borghese Gallery in Rome. Under pressure for a prompt decision, and unable at the moment to see in Rome the collection that could not be forwarded for leisurely inspection in New York, Miss Sarah Cooper Hewitt pressed into service the American novelist long resident in Italy, F. Marion Crawford, and on the strength of his reports pur-



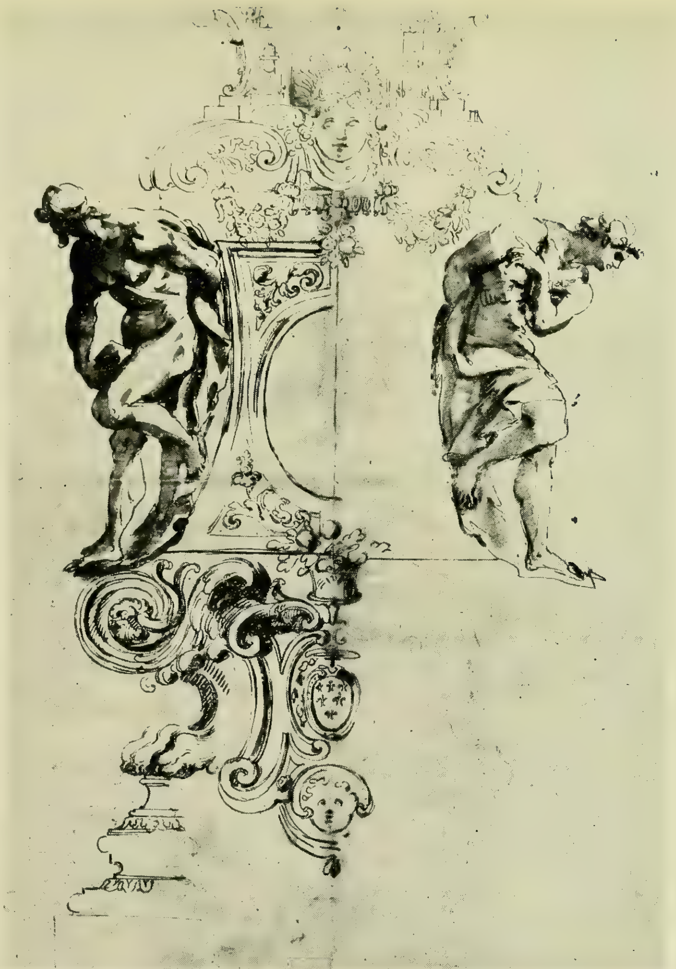
ALMONTE 434

Figure 1. Portrait of a man
Black chalk on brown paper
Italy, Lombardy, about 1510
From the Piancastelli Collection; purchased 1901



1901-38-107

Figure 2. The torso of a marble statue
of classical antiquity
Silverpoint drawing, probably by
Benozzo Gozzoli (1420-1497); 1450-1470
From the Piancastelli Collection; 1901



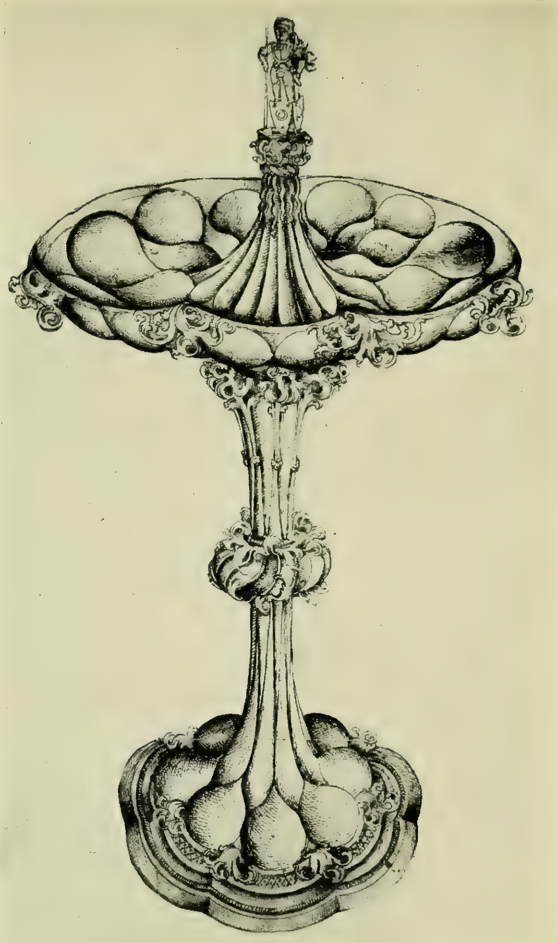
COWDERY 2394 1938-88-6482

Figure 3. Sketch for the foot of a silver crucifix in St. Peter's, Rome

Pencil, pen, and sepia washes, by Antonio Gentili (1531/2-1609)

Italy, Rome, 16th century

From the Piancastelli-Brandegee Collection; purchased 1938



COWDERY 417 1944-9-1

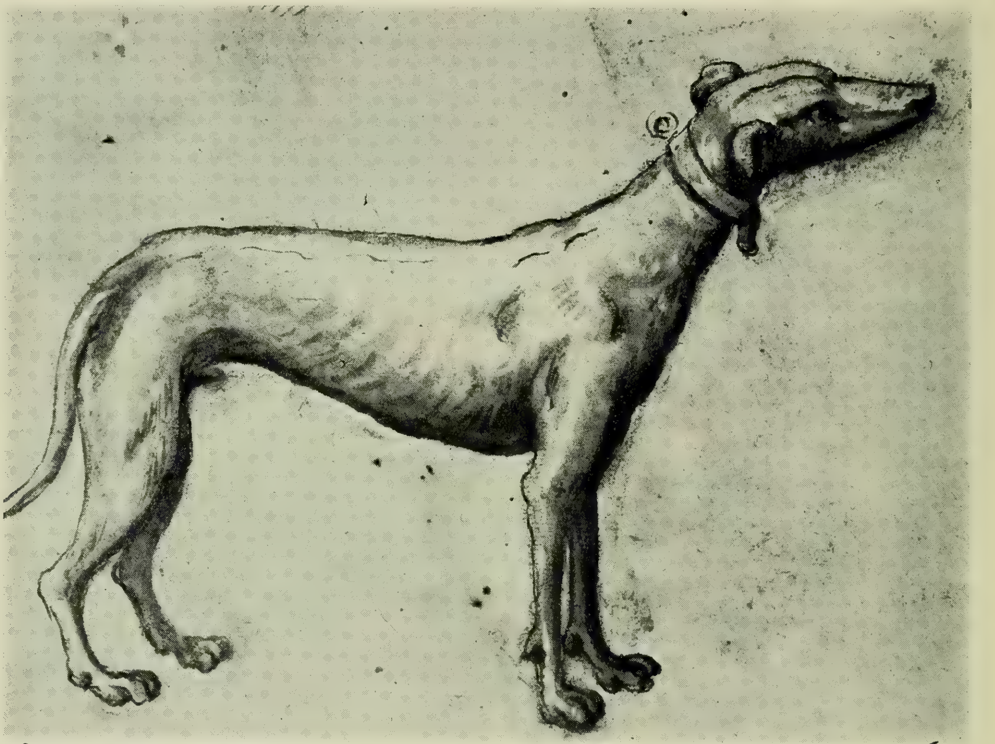
Figure 4. Project for a silver centerpiece

Pen-and-ink and water-color wash

Germany, Middle Rhenish, about 1480

Purchased 1944

chased that portion of the Piancastelli Collection that appeared most suitable to the needs of the young Museum. Approximately 3.500 drawings were contained in this group, representing architectural design, interior architecture, furniture, metalwork, book illustration, ornament



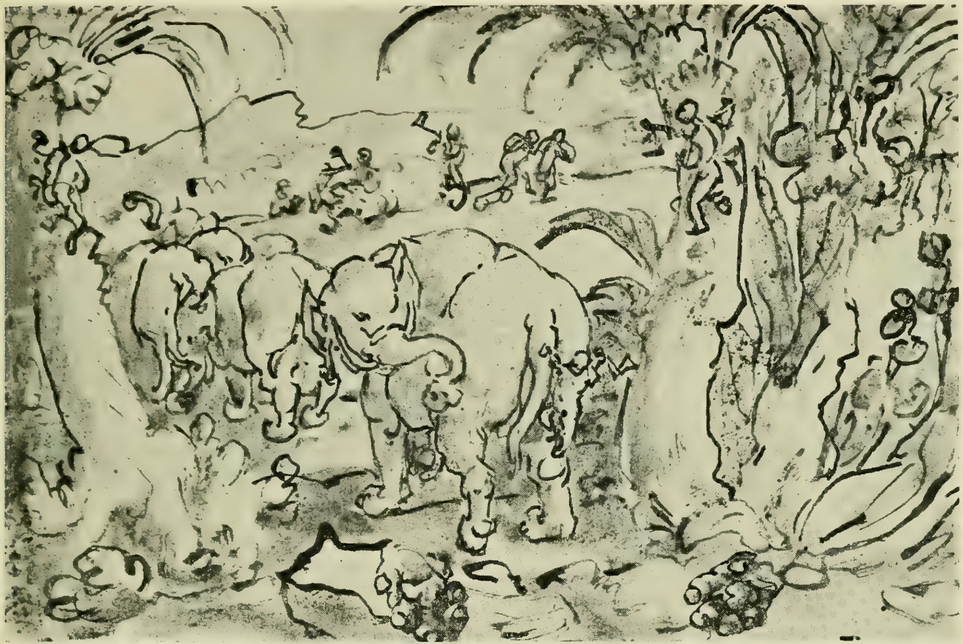
COWDERY 3339 1901-39-118

Figure 5. Study of a greyhound
Pen-and-ink and wash
Italy, 1550-1600
From the Piancastelli Collection; purchased 1901

and decoration, as well as anatomical study and other work of the Italian academies, and a not inconsiderable number of purely pictorial compositions. The cost of the purchase was met in part by the Misses Hewitt, in part by contributions made by such of their friends and supporters as Mrs. Charles B. Alexander, Henry Clews, Ogden Codman, Mrs. J. Woodward Haven, Erskine Hewitt, E. Willard Roby, Thomas Snell and Mrs. J. Clarence Webster.

Although unable to acquire the entire Piancastelli Collection, Miss

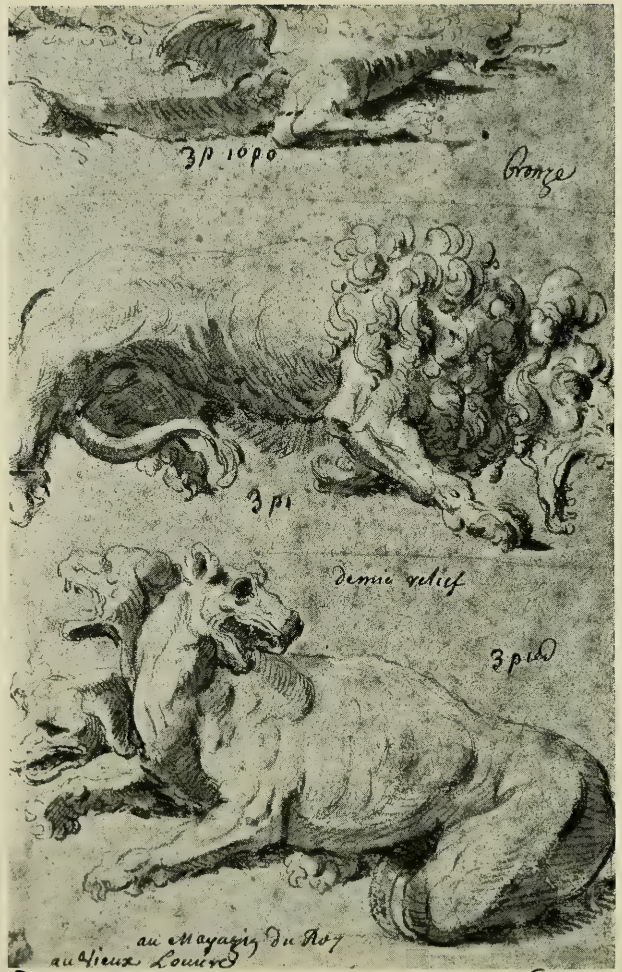
Hewitt did not long remain uninformed of the portion that had not come to the Cooper Union Museum. This, more than twice as large, was bought in 1904 by Mrs. Edward D. Brandegee, of Boston, who made it available to Miss Hewitt for study and comparison with the material here. Ultimately, in 1938, Mrs. Brandegee generously gave the Museum the opportunity to acquire the majority of her portion of the Piancastelli drawings, some 8,200 in number, so that with inconspicuous omissions the entire collection has been reunited.



COWDERY 1536 1901-39-163

Figure 6. Elephants attacked by the Troglodytes; study for an illustration to Pliny, *Natural History*. Book VIII, Chapter 8
Ink and wash, by Jan van der Straet, called Stradanus (1523-1605)
Executed in Italy, about 1590
From the Piancastelli Collection; purchased 1901

This acquisition has done nothing toward alleviating the lamented scarcity of Michelangelo drawings in the United States, but it has accomplished a great deal for those who are interested in tracing the development of architectural and decorative design in Italy from the seventeenth century into the nineteenth. The Battle of the Ancients and the Moderns, still fought in our own day whenever we erect such


3p 1opo
bronze
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3pied
au Magazin du Roy
au Vieux Louvre

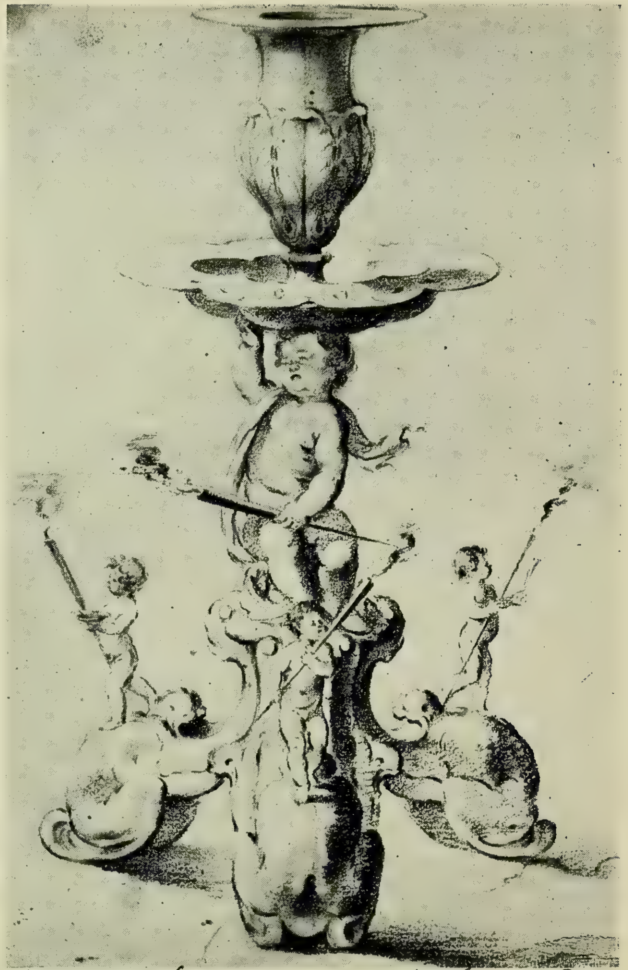
FRICK 30875 1911-28-6

Figure 7. Drawings of animals

Crayon and wash, by Charles-André Boulle (1642-1732)

France, Paris, about 1675

From the Decloux Collection; purchased 1911



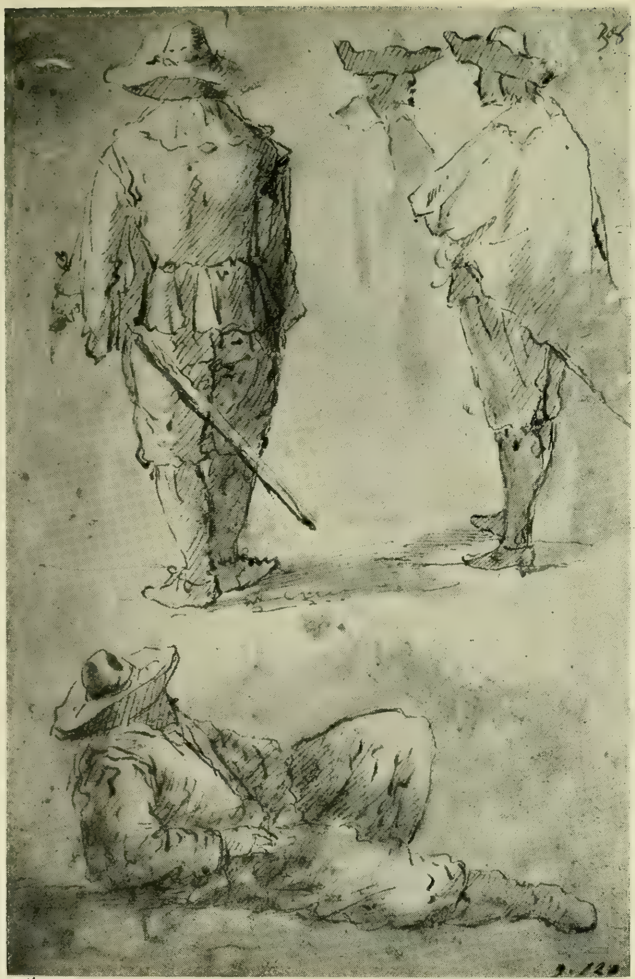
COWDERY 658 1916-9-8

Figure 8. Goldsmith's design for a candlestick

Black, red and white chalk

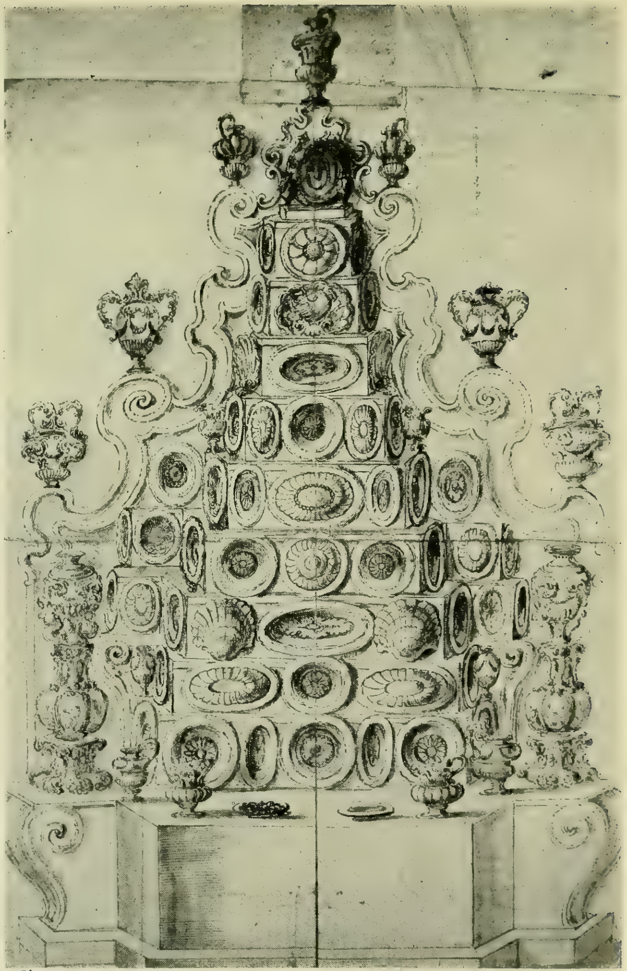
Antwerp, 1630-1650

Given by Ogden Codman, 1916



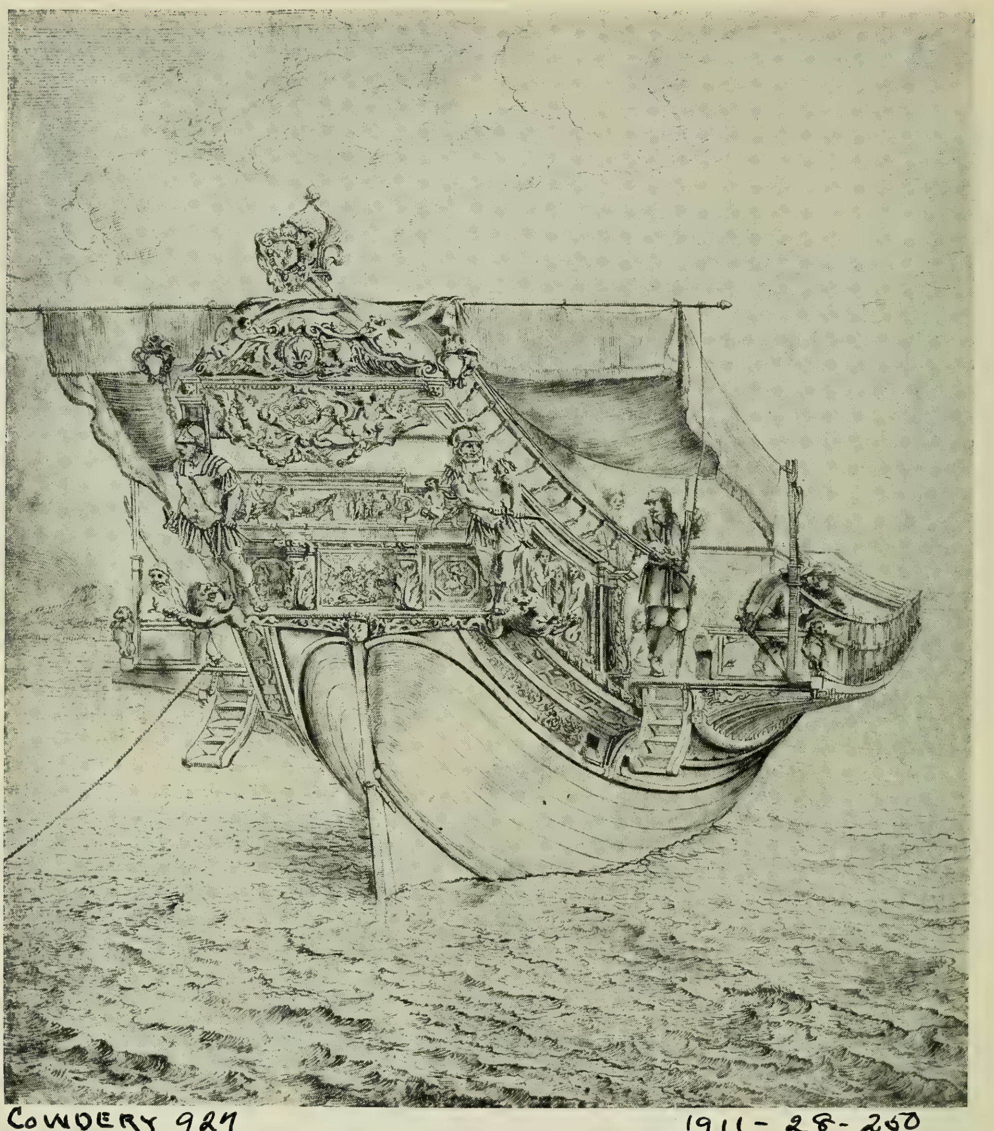
ALMONTE 942 1938-88-4431

Figure 9. Sheet from a drawing-book: Soldiers resting
Pen, bistre, wash and chalk, by Micco Spadaro, 1612-1679
Italy, Naples, 1630-1650
From the Piancastelli-Brandegee Collection; purchased 1938



COWPERY,655 1938-88-2896

Figure 10. Project for a buffet in a dining-room
Pen, brush, bistre wash, perhaps by Domenico Bolognese
Italy, mid-17th century
From the Piancastelli-Brandegee Collection, purchased 1938

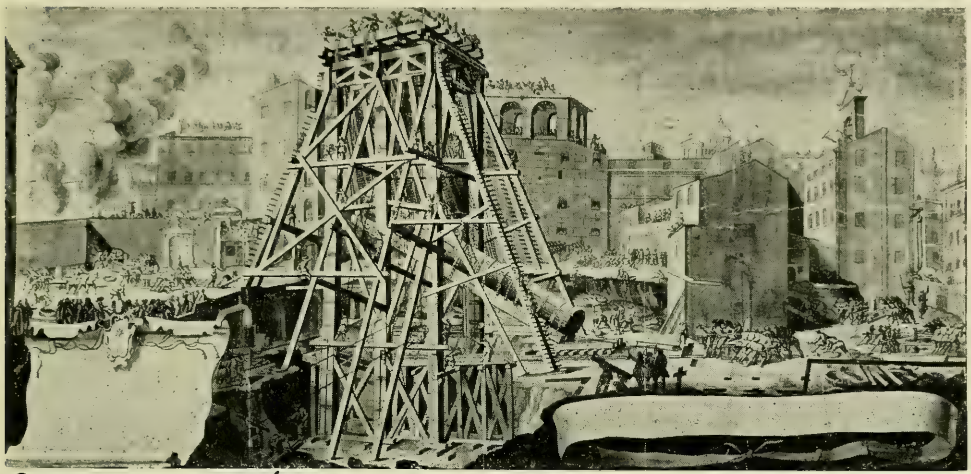


COWDERY 927

1911 - 28 - 200

Figure 11. Project for the sculptured decoration of a royal barge
Pen-and-ink on vellum, by Pierre Puget (1622-1694)
France, about 1650
From the Decloux Collection; purchased 1911

monumental structures as the Jefferson Memorial in Washington, has for all practical purposes been decided. It is almost inconceivable, for example, to this year's traveller that as recently as forty years ago Baedeker should still have been making this comment on the Libreria in Venice: "The effect is so fine as to justify certain liberties Sansovino has taken, such as that of enlarging the metopes at the expense of the triglyphs and architrave." We tend today to split other hairs; but an understanding of the architectural design of previous centuries and, through that, of the social structure and outlook of our ancestors, is based upon just such information as the design projects in the Piancastelli Collection make available.

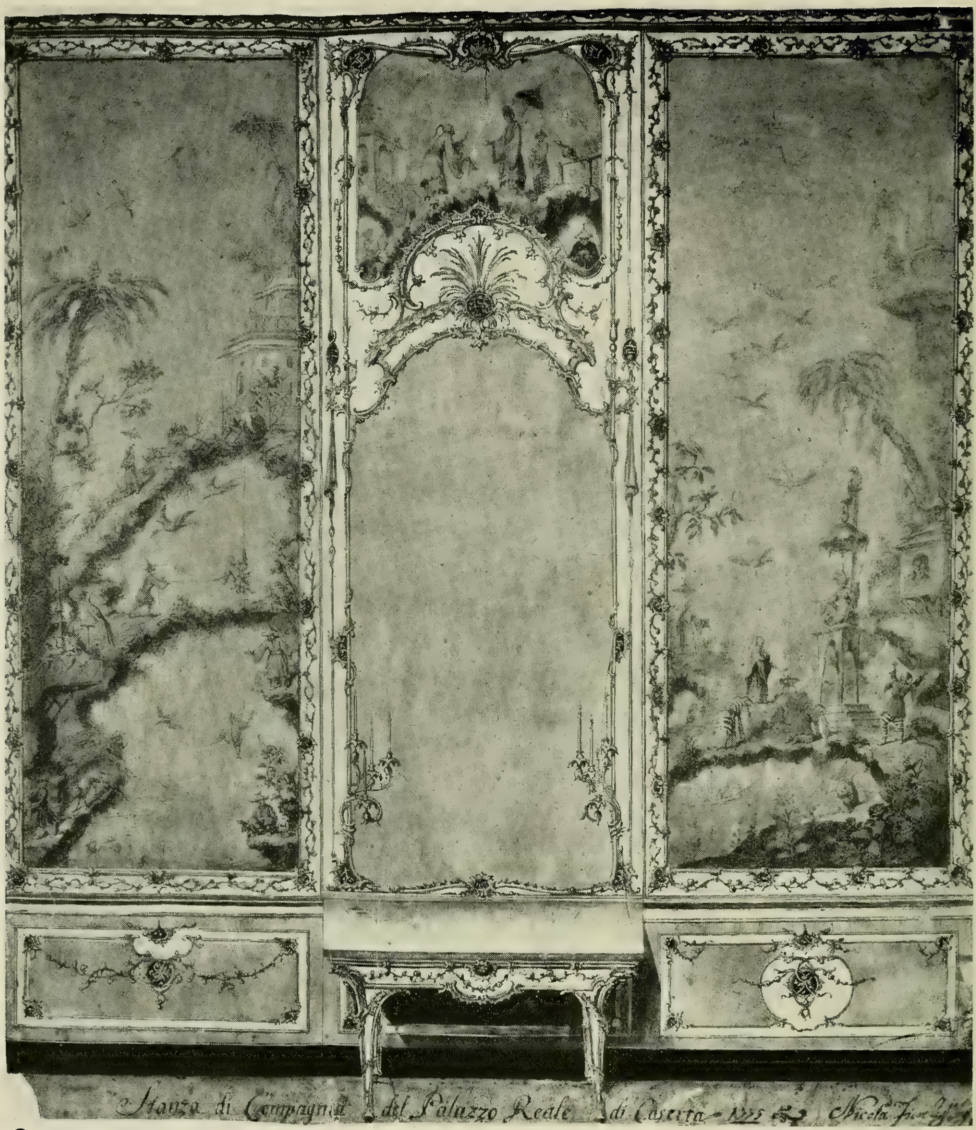


COWDERY 390-6

1942-20-1

Figure 12. Study for an engraving showing the preparation for moving the Column of Antoninus Pius in 1705
Pen-and-ink and wash, by Francesco Fontana (1668-1708)
Italy, Rome, 1705-1708
Purchased, 1942

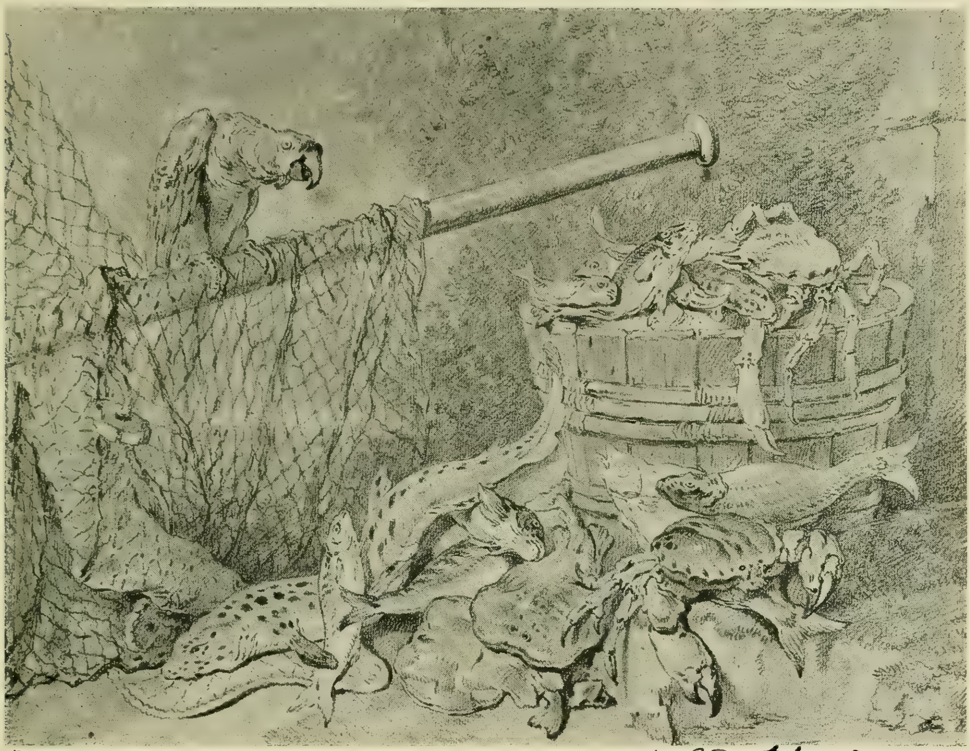
Rome was not built in a day, or in an idle moment; and, as it happens, four of the artists especially well represented in the Piancastelli accumulations each played his role, larger or smaller, in the gradual enrichment and embellishment of the chief centre of Western Christendom. The earliest of these is Jan van der Straet (born in Bruges, 1523; died in Florence, 1605), who, besides producing cartoons for the tapestry factory of Cosimo de' Medici in Florence, worked with Vasari in the Vatican


Stanza di Compagnia del Palazzo Reale di Caserta 1775
Nicola Fiore

COWDERY 196-14
1938-88-2487

Figure 13. Project for wall decoration in a drawing-room of the Palace of Caserta
Ink and water-color, by Nicola Fiore
Italy, Naples, 1775
From the Piancastelli-Brandegee Collection; purchased 1938

from 1550 to 1553. Van der Straet, perhaps more familiar under his Latinized name, Stradanus, was extensively published by the enterprising print-makers of Antwerp; and the Museum possesses a number of drawings from his hand that were prepared for the engravers of book illustrations and series of illustrative prints (Fig. 6).



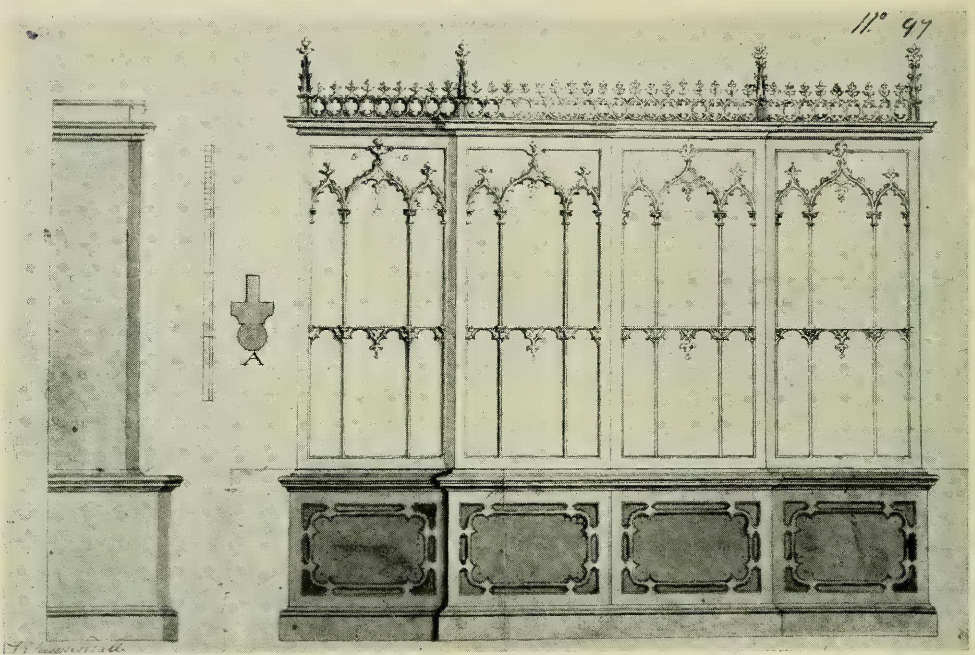
ALMONTE 271

1938-88-2

Figure 14. Still life of fish with parrot
Crayon on green paper, by Jean-Baptiste Oudry (1686-1755)
France, 1740
From the Sarah Cooper Hewitt Collection; purchased 1938

Another man who made a small addition to the developing architectural richness of Rome was Carlo Marchionni (1702-1786). Architect and engraver, sculptor and caricaturist, builder of the New Sacristy of St. Peter's, he is represented here by a handful of architectural studies that carry on into his century the spirit of the great Palladio.

Later in the century came the equally versatile, and far more accomplished, Guiseppe Valadier. Grandson of a French metalworker who had come to Italy early in the century, son of the metalworker and master goldsmith who cast the great bell of St. Peter's, Valadier was a prize-winner at the age of thirteen, when in 1775 he gained recognition

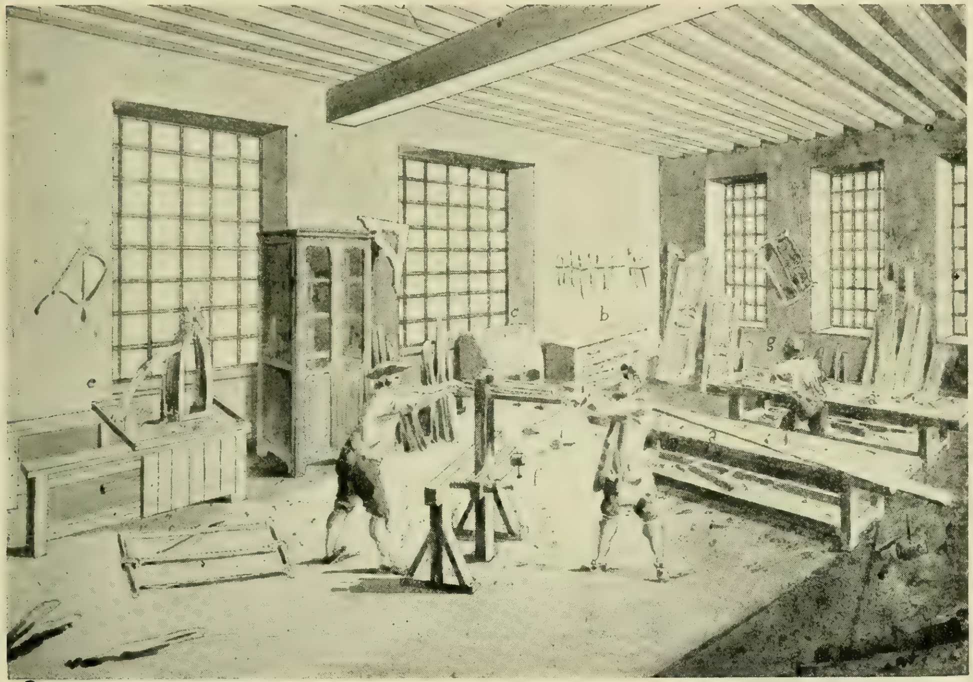


COWDERY 2540 1949-101-1

Figure 15. Project for a library bookcase
Pen-and-ink and wash, by Thomas Chippendale (1718-1779)
England, 1761
Purchased 1949

in the Concorso Clementino. He was thoroughly trained in design, and equally well grounded in technical knowledge; only twenty-three when he was obliged to assume the management of his father's goldsmithing establishment, he operated this successfully. Architect of the Vatican and of the City of Rome, his genius ranged over a wide field, from the publication of books of his designs to the reconstruction of the Arch of Titus and the designing of many individual structures. His most conspicuous achievement, however, was the redesigning and rehabilitation of the Piazza del Popolo, which for generations had presented an unseemly squalor to the traveller arriving from the north.

The drawings by Valadier in the Museum's collection are a delightful reflection of a fertile, incisive mind and an easy mastery of problems in design. With equal facility are sketched grandiose schemes for town-planning, for country-houses and palaces (Fig. 22), goldsmith's designs,

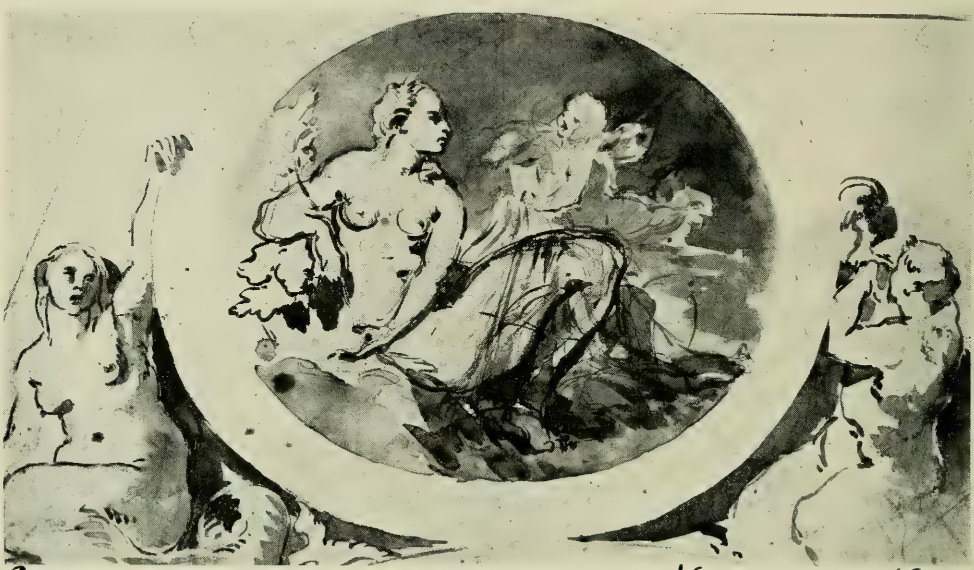


Cowdery 2586 1911-28-112

Figure 16. Cabinetmaker's Shop; study for illustration to the *Recueil de Planches*, Vol. IV, pl. 1, of Diderot's *Encyclopédie*
Ink and wash; France, about 1765
From the Decloux Collection; purchased 1911

projects for cabinetmakers, and a host of the ornamental structures that give life and beauty to a city and its free spaces. There are even, for good measure, a few studies for such displays of fireworks as he was frequently called upon to design. Fortunately, the Museum possesses some hundreds of sheets from his hand, and they are among the most rewarding of the entire Piancastelli purchase.

A slightly later figure, by no means as accomplished as Valadier but curiously interesting today, is Filippo Agricola (1776-1857). Born in Urbino of a family originally German (*Bauer* into *Agricola*), he is now likely to be known to Americans only as the designer of the cartoons for the inescapable mosaics on the facade of San Paolo fuori le Mura at Rome. The handful of drawings by which he is represented in the Cooper Union Museum, however, presents the man as an entirely unexpected voyager into regions customarily thought to have been discovered by the twentieth century.



COWDERY 925

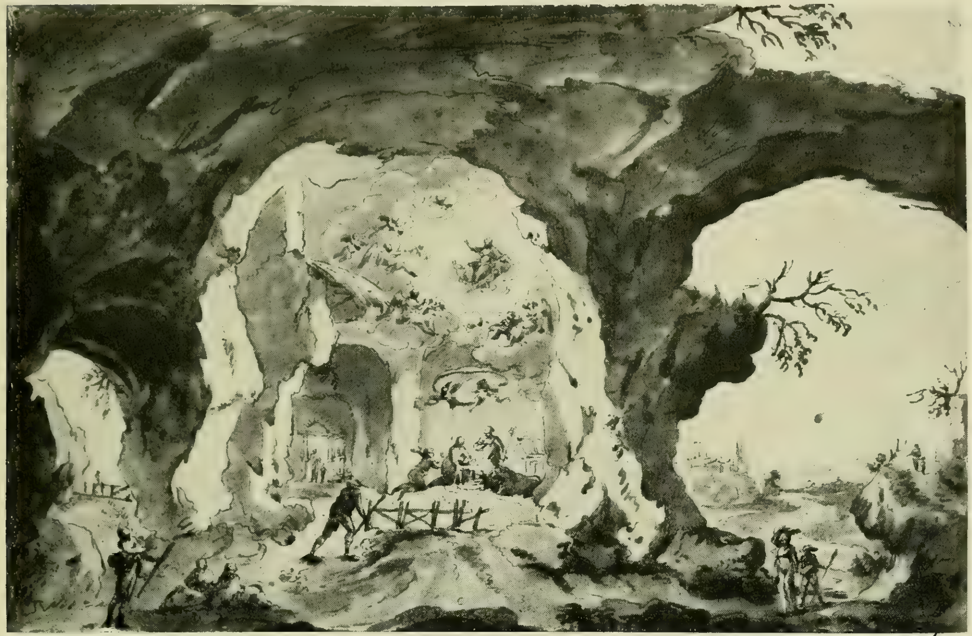
1911-28-146

Figure 17. Sketch for an overdoor
Charcoal and wash
France, about 1775
From the Decloux Collection; purchased 1911

In the simplicity of self-esteem we are prone to regard the work of our predecessors as an interesting, if unrealized, forecast of our own more considerable achievements; but it is equally possible to regard these studies by Agricola as testimony to the perdurable vitality of classical antiquity, reinterpreted in a manner that at least superficially resembles some of the expressions of Picasso and Chirico.

Even before the Piancastelli drawings arrived, others of somewhat similar character had been acquired in New York, some from the large collection formed by John J. Peoli that was dispersed at auction after his death in 1894.[2] Another early acquisition was an unusual group of cartoons for French printed cottons, of the late eighteenth century and the first years of the nineteenth, which was purchased in 1898.

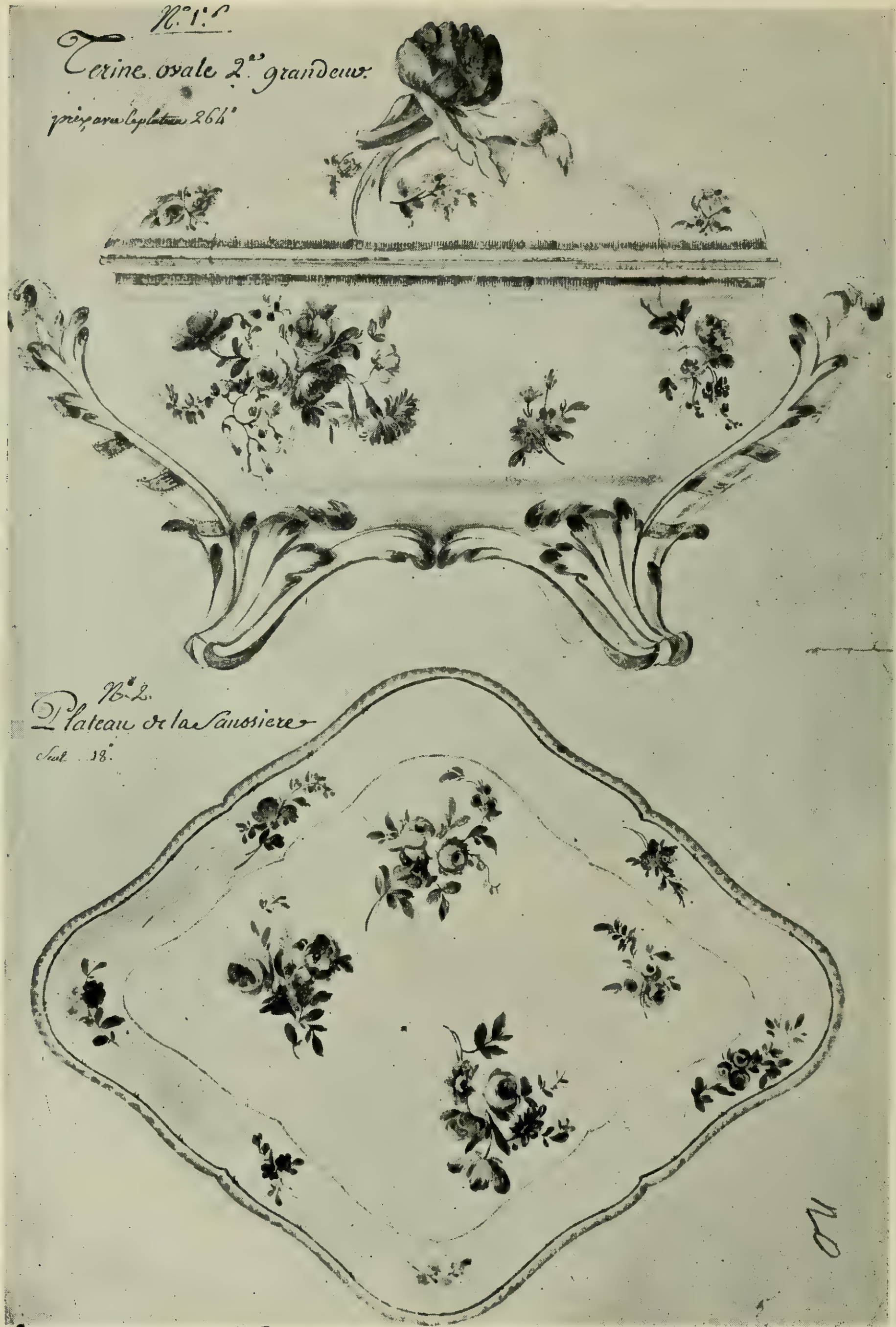
Another collector, who for some years had been gradually accumulating, in Paris auction rooms and antiquaries' shops, French architectural and decorative designs, became known to the Hewitts at about this time. Léon Decloux, an architect living at Sèvres, had managed to bring together not only a large number of ornament prints and books of design, ranging in date from the seventeenth into the nineteeth century, but possessed approximately five hundred original drawings, many of first rank. He released a few in 1907, a few more in 1908, and finally the bulk of his collection was purchased in 1911, through the contributions of the Council for the Museum. Individually charming, in the aggregate these drawings are a key to the whole range of archi-



COWDERY 2693

1901-39-504

Figure 18. The Nativity
Pen-and-ink and sepia washes
Italy, about 1770
From the Piancastelli Collection; purchased 1901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Terine ovale 2e grandeur.
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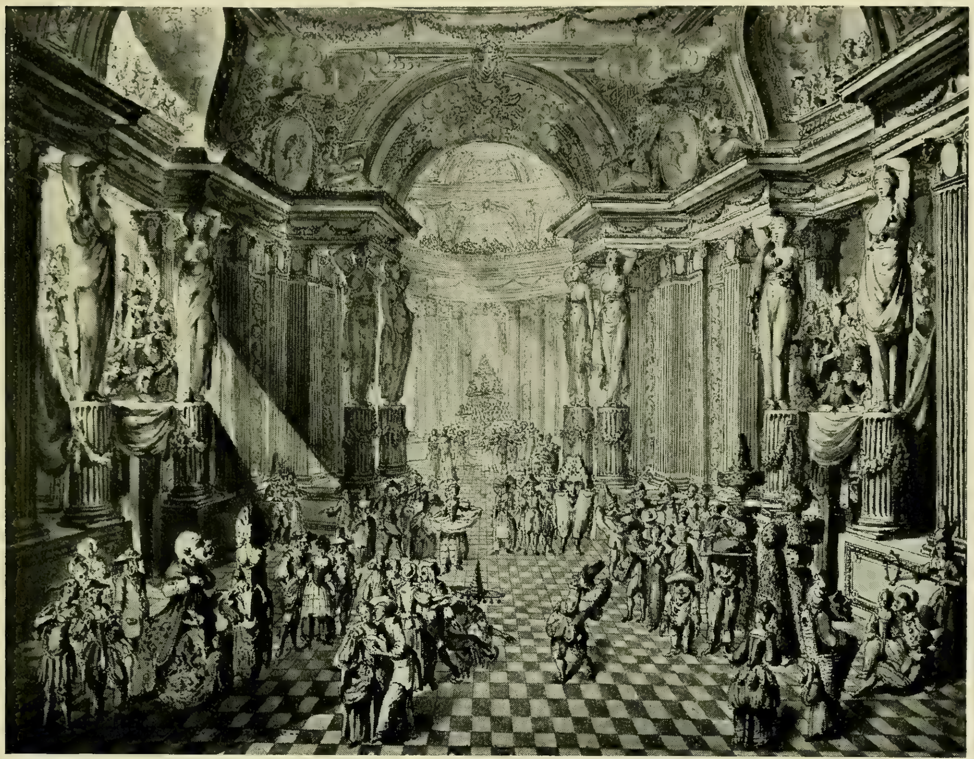
N° 2.
Plateau de la Saussiere
Seul . . 18.
2

COWDERY 3438 1938-88-8315

Figure 19. Design for the decoration of a porcelain tureen and tray
Pen-and-ink and water-color
France, probably Sèvres, about 1775
From the Piancastelli-Brandegee Collection; purchased 1938

tectural and decorative taste in France of the unfolding eighteenth century, beginning with such exponents of the taste of Louis XIV as Boulle (1642-1732) (Fig. 7), and Puget (1622-1694) (Fig. 11), carrying along with Toro (1672-1731) and the first development of rococo design with

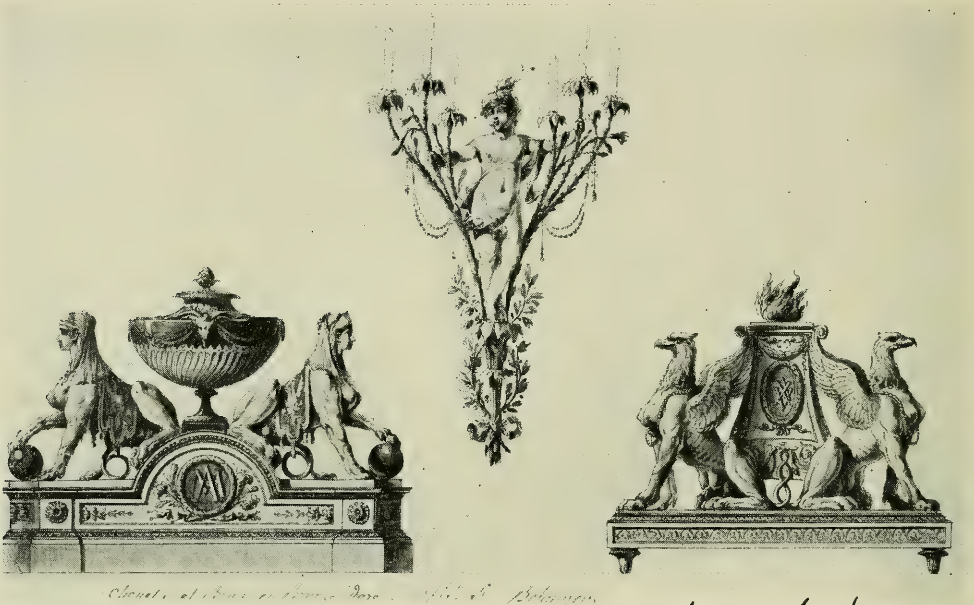


COWDERY 1223 1911-28-38

Figure 20. Fantastic masquerade
Pen-and-ink, with water-color and ink washes, by Jean-Charles Delafosse (1734-1789)
France, about 1780
From the Decloux Collection; purchased 1911

Oppenort (1672-1742) and Meissonnier (1695-1750); then Nicolas Pineau (1684-1754), perhaps better known for his work at Peterhof than for anything that he executed in France; and following to the last days of the *ancien régime* with designs by Bélanger (1744-1818) for Marie Antoinette (Fig. 21). For good measure, the Decloux group even included a few drawings produced under the First Empire and, at the earlier end of the series, the sixteenth-century drawing by Jacques Androuet du Cerceau (1512-1592) of his Château de Verneuil.[3]

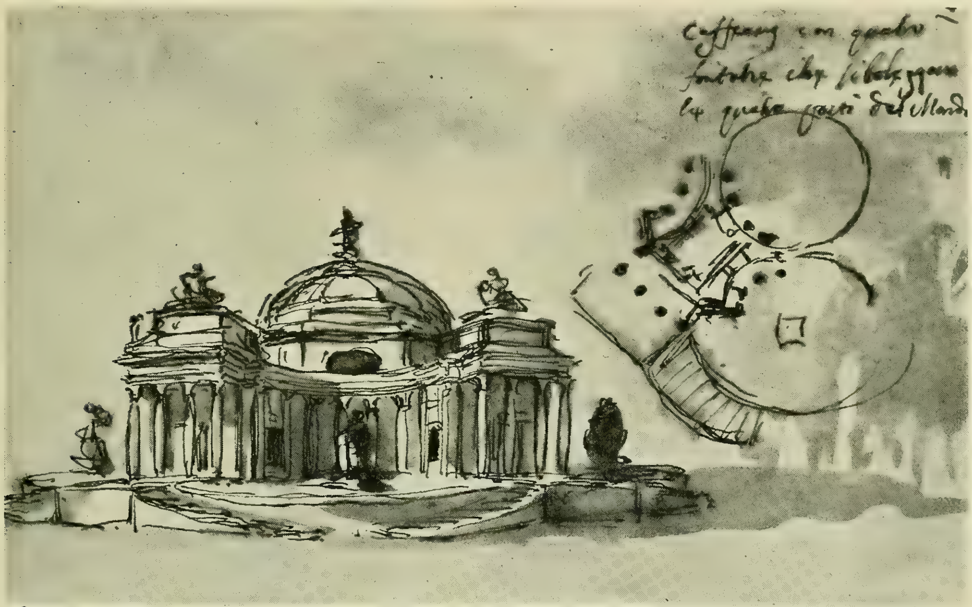
In the meantime a quite different predilection of the Misses Hewitt had brought to the Museum, as well, drawings unrelated to the decorative arts. Interested in the development of painting in the United States, and anxious to obtain material that would be of value to students of the Art School conducted by The Cooper Union under the same roof, these indefatigable ladies had set about assembling work by American artists. In 1904 came the first gift, a group of drawings by Robert W. Blum, representing the preparatory work for his large painting, *The Vintage Festival,* in Mendelssohn Hall in Brooklyn.



COYYDERY 5727-0 1921-6-61

Figure 21. Designs for wall light and andirons bearing the cipher of Marie Antoinette
Ink and water-color, by François-Joseph Bélanger (1744-1818)
France, about 1785
From the Decloux Collection; purchased 1911

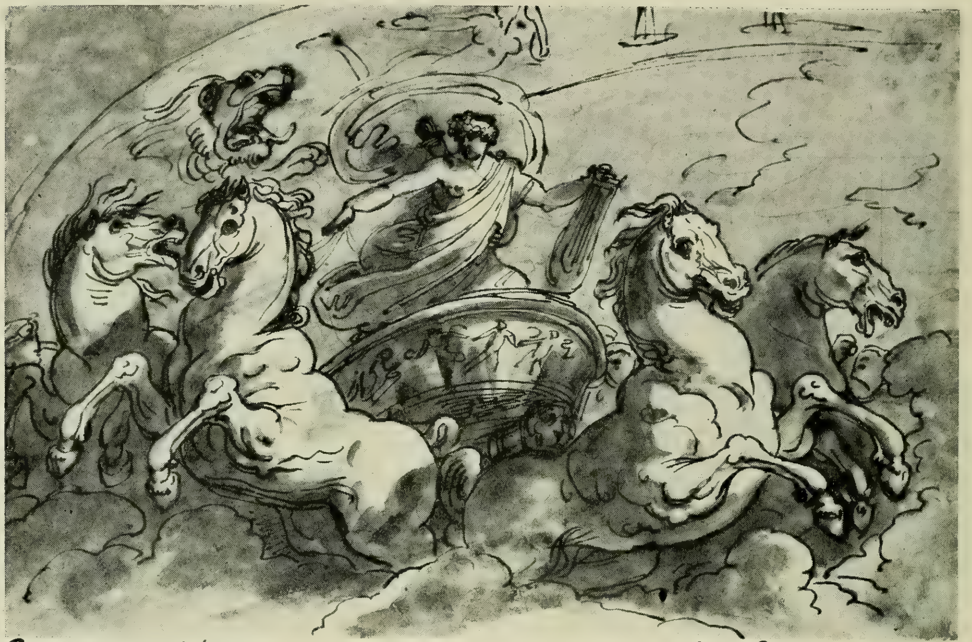
Other gifts of American drawings followed. In 1912 Mr. and Mrs. Charles Savage Homer presented to the Museum more than three hundred drawings by Winslow Homer, A.N.A. (1836-1910), a group that represents every phase of Homer's work from pre-Civil War days until the end of his career (Fig. 28), and includes first sketches for a half-dozen of his best-known paintings. In 1917 came nearly one hundred drawings by Thomas Moran, N.A. (1837-1926), whose fondness for Western landscapes (Fig. 27) had led to the naming of a Wyoming mountain in his honor; and in the same year Mr. Louis P. Church gave over two thousand oil and pencil studies by his father, Frederick Edwin Church, N.A. (1826-1900). Studies by Kenyon Cox, N.A. (1856-1919) for his Library of Congress decorations were given in 1923 by Mrs. Cox; and some years later came, by bequest of Erskine Hewitt, more than nine hundred drawings by Daniel Huntington, P.N.A. (1816-1906), including many studies for well-known portraits. Smaller groups of drawings by Thomas Doughty (1793-1856), Samuel Colman, A.N.A. (1832-1920), Walter Shirlaw, N.A. (1838-1909), Francis Hopkinson Smith (1838-1915), Augustus Saint-Gaudens, N.A. (1848-1907), Walter Clark (1848-1917), Howard Russell Butler, A.N.A. (1856-1934) and others have also come to Cooper Union.



COWDERY 2632 1938-88-1097

Figure 22. Project for a café
Pen-and-ink and sepia wash, by Giuseppe Valadier (1762-1839)
Italy, Rome, 1795
From the Piancastelli-Brandegee Collection; purchased 1938

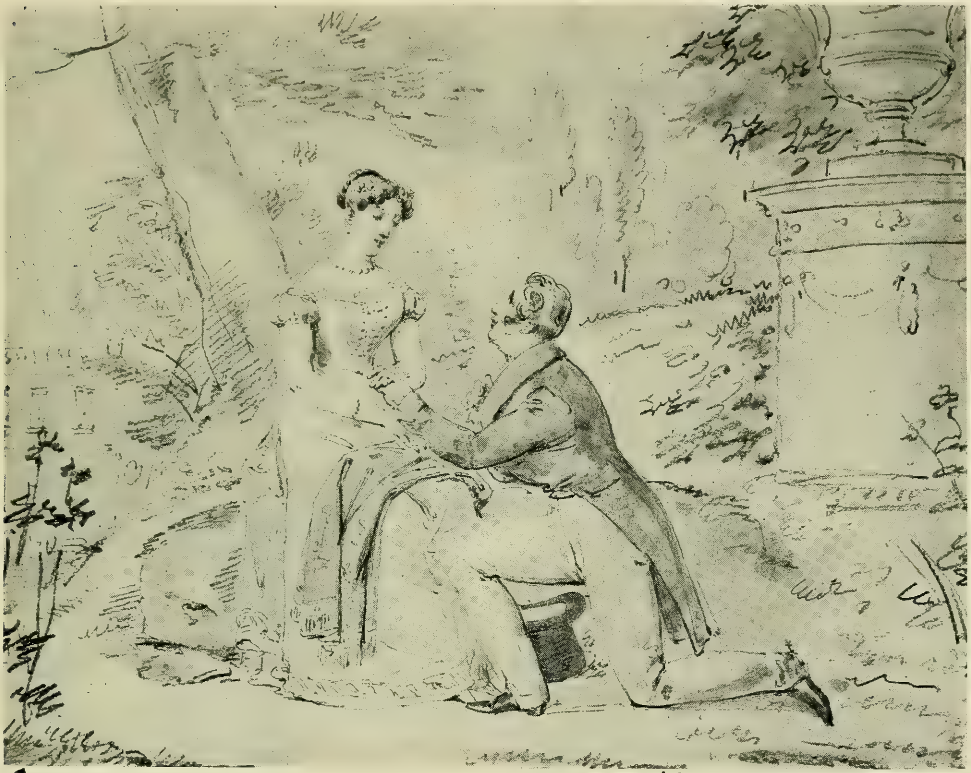
The work of American architects of the same period is also on hand, such men as Bancel La Farge (1865-1938), Stanford White (1853-1906), Arnold W. Brunner (1857-1925) and Whitney Warren (1864-1943) (Fig. 30) being represented by drawings for significant structures.



COWDERY 3425 1901-39-1688

Figure 23. Project for a mural painting: The Chariot of Apollo
Ink and sepia wash, by Felice Giani (about 1760-1823)
Italy, Rome, 1810-1823
From the Piancastelli Collection; purchased 1901

Following the purchase of the Decloux drawings, little more decorative design of European origin was acquired until after the First World War. In 1923 a lucky find in Lyon brought to the Museum a group of early nineteenth century designs for woven fabrics and embroidery, some of which may with fair assurance be attributed to the accomplished Jean François Bony (*c.* 1760-*c.* 1828). But the death of Miss Eleanor Garnier Hewitt in 1924, followed by the disbanding of the Council for the Museum, which had given great encouragement and generous financial support, was followed by the illness and death of Miss Sarah Cooper Hewitt in 1930; and some years were to pass before the Museum again received significant additions to its collection of drawings. One such influx occurred early in 1938 with the purchase, already mentioned, of the Piancastelli-Brandegee group; and in the same year the Erskine Hewitt Bequest brought the Huntington drawings, to which reference has likewise been made, and the small collection of drawings formed by Miss Sarah Cooper Hewitt. The most important of Miss Hewitt's drawings are several by Giambattista Tiepolo (1696-1770); though no less pleasure may be taken in the handful of sketches by Constantin Guys (1805-1892) (Fig. 25).

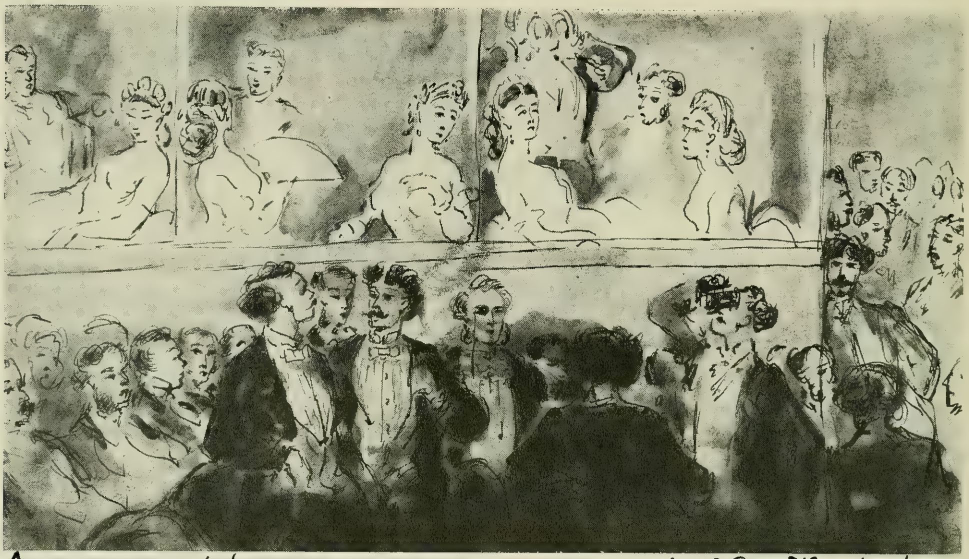


COWDERY 2594

1931-73-25

Figure 24. The Proposal
Pencil and water-color washes, by Achille Devéria (1800-1857)
France, about 1820
From the Peoli and Sarah Cooper Hewitt Collections; received by bequest 1931

In more recent years no large lots of drawings have been acquired, but smaller groups and single items have steadily come to round out the Museum's graphic collection and, when possible, to provide it with modern material (Fig. 33). First sketches for the Villa Stein, built at Garches, near Paris, for Leo Stein by Charles-Edouard Jeanneret-Gris, better known as Le Corbusier, were an American "first" in 1936; and another first-time-in-America acquisition was the original silversmith's design by Georg Jensen that came in 1937. The fifteenth-century Italian silverpoint attributed to Benozzo Gozzoli (1420-1497) (Fig. 2) that came with the Brandegee purchase to be the Museum's oldest drawing was joined in 1944 by a German design for a silver centerpiece (Fig. 4), of approximately the same date. Another extremely welcome addition, though of a different order, was the series of original designs by Frederick Crace (1779-1859) for the decoration of that astonishing building, the Royal Pavilion at Brighton. Nearly one hundred drawings, most of them in color, came in 1948; as it is hoped to arrange a

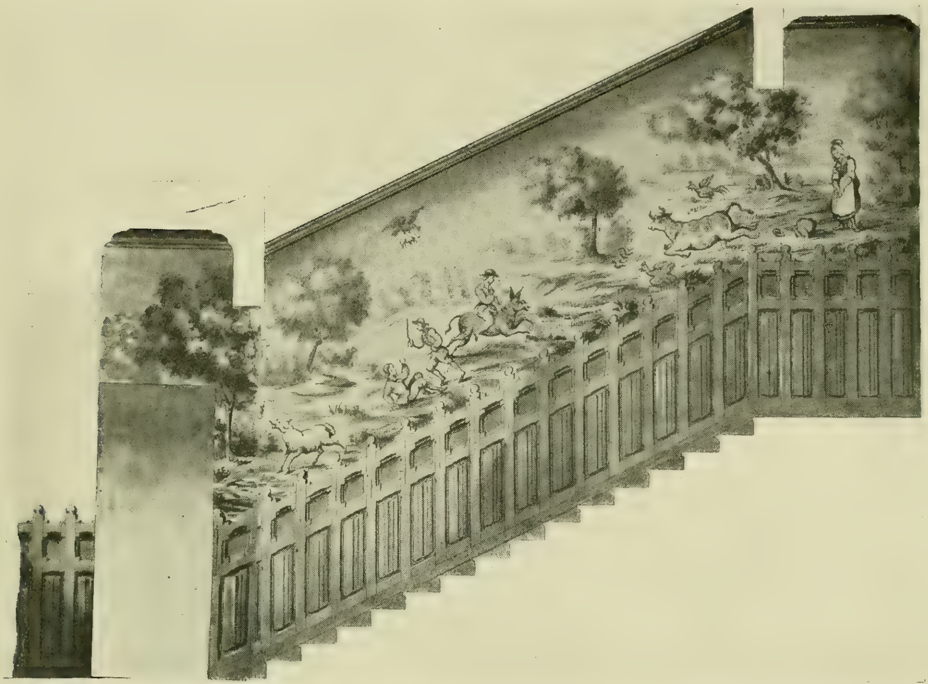


ALMONTE 264 1938-57-106

Figure 25. At the theatre
Pen-and-ink and wash, by Constantin Guys (1805-1892)
France, about 1865
From the Collection of Sarah Cooper Hewitt; Bequest of Erskine Hewitt, 1938

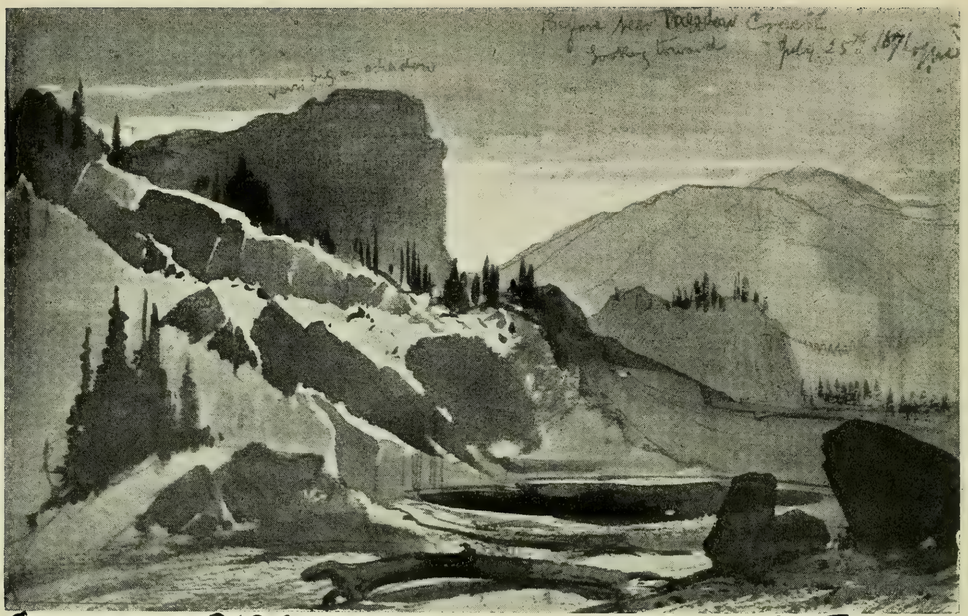
special showing and publication of them in the coming season, none is here illustrated.

The Museum's collection of drawings, as this brief survey has shown, is not all-inclusive. German and English representation is meagre, Spanish and Scandinavian work almost entirely lacking, and the vacuum created by an earlier proscription of material postdating 1825 has not yet been filled. Even with these shortcomings, however, it remains one of the fullest American collections known to the writer; and hopes are high for its further development through gift and purchase. In the richly varied subject-matter of these many sheets, so closely related to other divisions of the Museum's collections, in the technical excellence of much of the material, and in the facility with which it may be



COWDERY 1457 1939-79-3

Figure 26. Project for the decoration of a staircase in Château-sur-Mer,
Newport, Rhode Island
Ink and water-color, by Charles Salagnad
France, Paris, 1872
Given by the Misses Wetmore, 1939

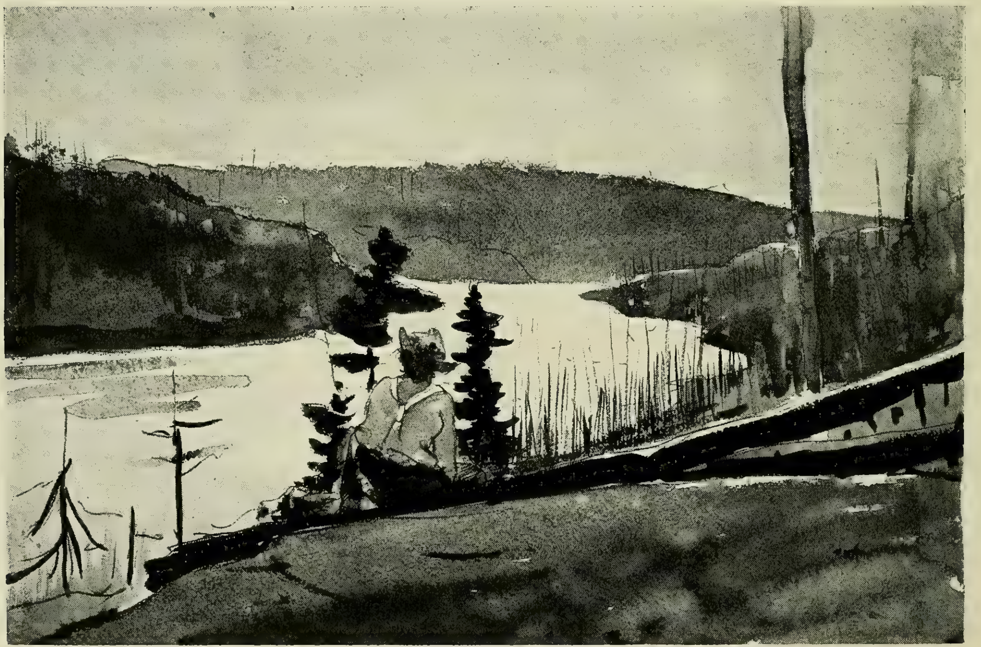

looking toward
July 25th 1871
in shadow

COWDERY 540C

1917-17-8

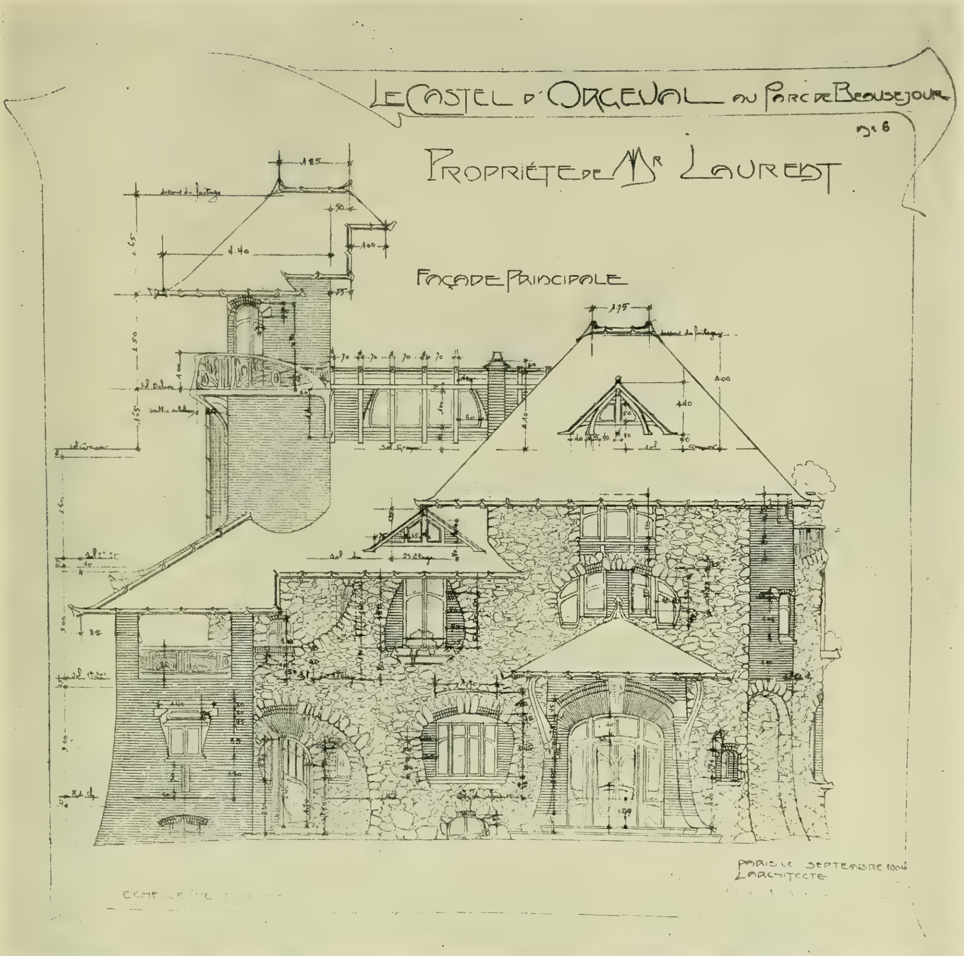
Figure 27. Meadow Creek, Utah
Pencil and wash, by Thomas Moran (1837-1926)
United States, 1871
Given by Thomas Moran, 1917

Figure 28. Mountain lake
Pencil, ink and water-color, by Winslow Homer (1836-1910)
United States, about 1895
Given by Charles Savage Homer, 1913



FRICK 30062

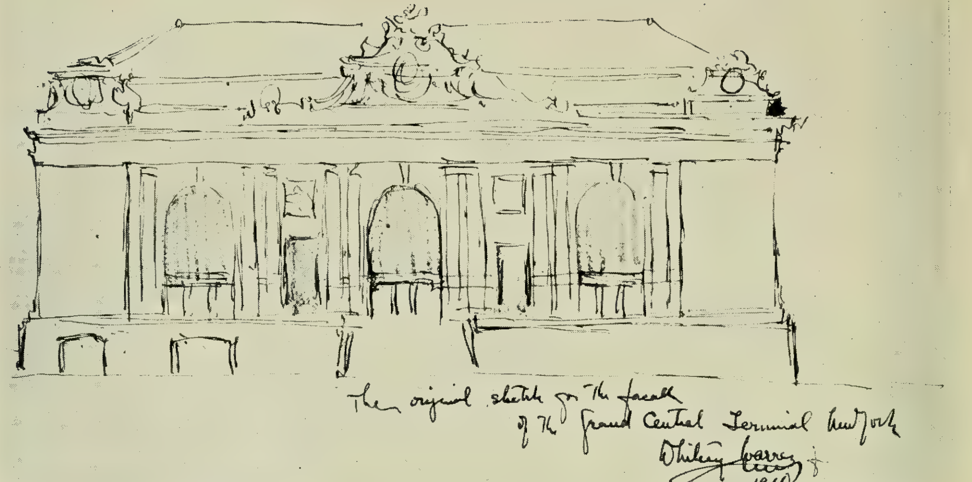
1913·18-4


LE CASTEL D'ORGEVAL AU PARC DE BEAUSEJOUR
N° 6
PROPRIÉTÉ DE Mr LAURENT
FAÇADE PRINCIPALE
PARIS LE SEPTEMBRE 1904
L'ARCHITECTE

COWPERY 3436

1950 · 66 – 2

Figure 29. Front elevation, Le Castel d'Orgeval
Pen-and-ink, by Hector Guimard (1867-1942)
France, Paris, 1904
Given by Madame Guimard, 1950



The original sketch for the facade
of the Grand Central Terminal New York
Whitney Warren
1910

COWDERY 639

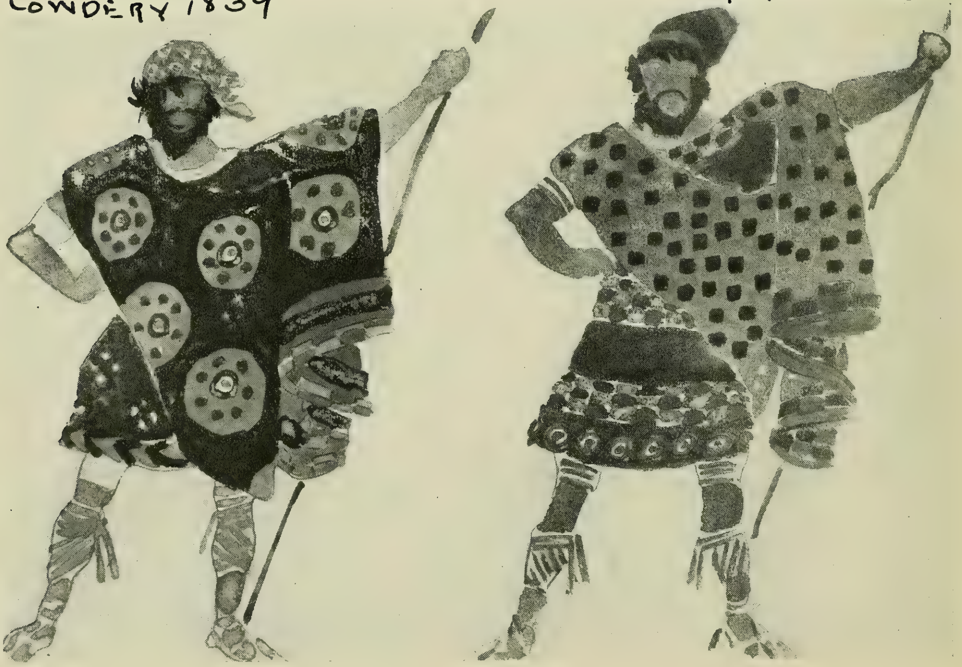
1943-51-13

Figure 30. The original sketch for the facade of the Grand Central Terminal, New York
Crayon and pencil, by Whitney Warren (1864-1943)
United States, New York, 1910
Given by Mrs. William Greenough, 1943

Figure 31. Design for costumes of Brigands in the ballet, *Daphnis et Chloé*
Water-color, by Léon Bakst (1868-1924)
France. Paris, 1913
Given by Mrs. G. Macculloch Miller, 1947

1947-77-2

COWDERY 1839



inspected, the collection constitutes a valuable testing-ground for the eye of the student, a useful stimulus for the pencil of the designer, and an easy guide for the development of understanding in the more casual visitor.

CALVIN S. HATHAWAY

NOTES

[1] The Museum has published the following brief studies of drawings in its collections:

Rudolf P. Berliner. The stage designs of the Cooper Union Museum. *Chronicle of the Museum for the Arts of Decoration of The Cooper Union,* V. 1, No. 8 (August 1941), p. 284-320; illus.

Rudolf P. Berliner. Italian drawings for jewelry, 1700-1875; an introduction to an exhibition. 1940.

Edna B. Donnell. An album of Chinnery drawings. *Chronicle,* V. 2, No. 1 (October 1949), p. 14-22; illus.

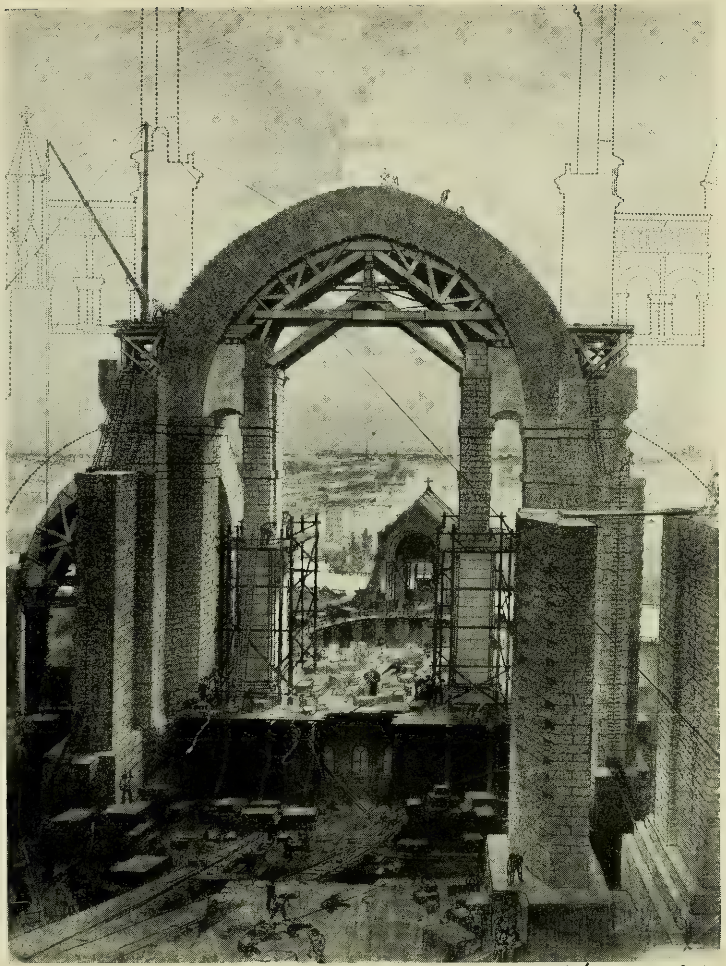
Calvin S. Hathaway. Drawings by Winslow Homer in the Museum's Collections. *Chronicle,* V. 1, No. 2 (April 1936) ; p. 52-63; illus.

Calvin S. Hathaway. Original designs for French silversmiths' work, with examples of the craft. *Chronicle,* V. 1, No. 1 (Winter 1934-35), p. 15-22; illus.

Frances Morris. Exhibition of printed fabrics, with original cartoons and designs. *Chronicle,* V. 1, No. 1 (Winter 1934-35), p. 4-11; illus.

[2] His daughter, Mary A. Peoli, was the first Curator of the Museum, serving under the Misses Hewitt from 1897 to 1904.

[3] No detailed comment on the drawings of the Decloux Collections is here made, since some of the most significant have been studied by Fiske Kimball and illustrated in *The Creation of the Rococo,* Philadelphia, 1943.

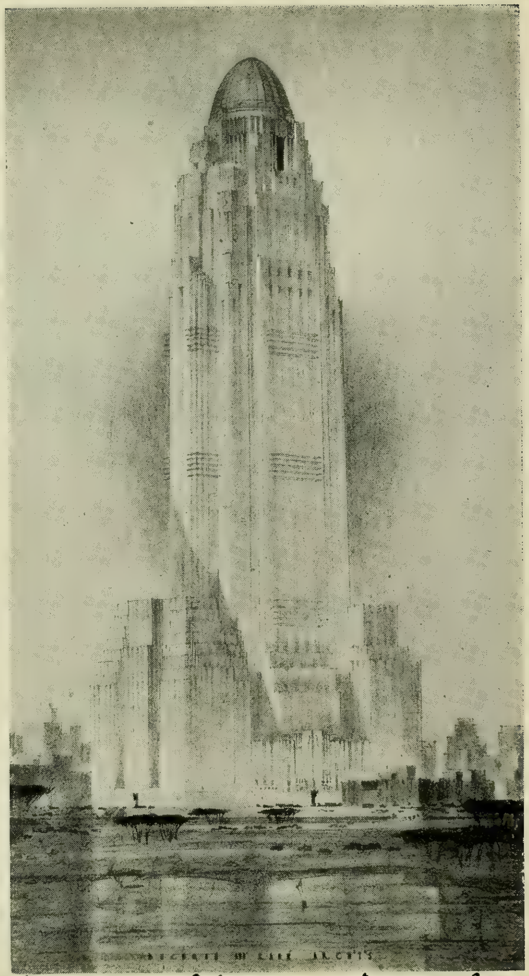


C58652 1936.7-17

Figure 32. Perspective rendering of the crossing, Cathedral of St. John the Divine, New York

Pencil, ink, crayon and wash; United States, New York, 1903

Given by Spencer Bickerton, 1936



COWDERY 3439 1952-15-13

Figure 33. Perspective study for a skyscraper

Pencil on paper; Buchman and Kahn, Architects

United States, New York, 1930

Given by Ely Jacques Kahn, 1952

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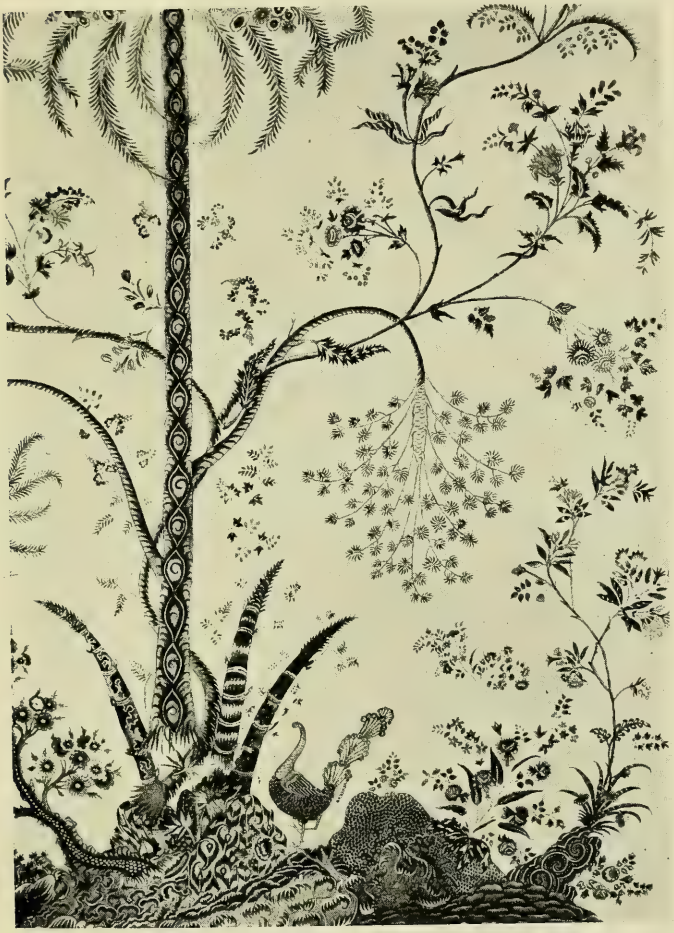
CHRONICLE OF THE MUSEUM FOR THE ARTS OF DECORATION OF THE COOPER UNION



Detail of coverlet or hanging: painted and dyed cotton. India, Madras, second half 18th century. Purchased, Au Panier Fleuri Fund.

VOL · 2 · NO · 5 JUNE · 1953

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CHRONICLE OF THE MUSEUM
FOR THE ARTS OF DECORATION
OF THE COOPER UNION

VOL · 2 · NO · 5 JUNE · 1953

It is only natural that a museum should wish to publish accounts of its collections, particularly when these include examples of categories that are not often found in museums and are rarely the subject of written comment. Less frequently, however, does a museum offer a description of its activities, although the use made of museum objects is no less interesting than the objects themselves. The present issue of the *Chronicle* examines both of these themes, reporting on a section of the collection currently under development and telling of an experiment in museum service that is as promising as it is unusual.

The Museum has twice, during the present year, suffered the loss of loyal and generous friends. In February, 1953, Mrs. Henry B. du Pont died. A friend and supporter of the Museum for two decades, she had only in the autumn accepted an appointment to the Advisory Council; her quick and sympathetic understanding will be greatly missed.

Two months later, in April, the Museum and all the other divisions of The Cooper Union were shocked by the sudden death of Gano Dunn, Chairman of the Trustees. His utter devotion to the well-being and development of the institution are too familiar to all to require any comment; his greatness and generosity of spirit were such as to leave in his followers a lasting gratitude and admiration.

ENGINEERING STUDENTS IN THE MUSEUM

In recent years the use of visual aids has become an accepted procedure in higher education. There was a time, not so very long ago, when instructors had to depend on photographs of works of art in courses in art appreciation, for example. Today, the use of color slides is common practice. There is still to be developed, however, the systematic use of actual objects as aids in the study of the arts and crafts, in literature, and in the social sciences.

It is true that schools and colleges make more and more use of the museum field trip for the purpose of looking at objects related to text-book studies; but very little attempt has been made to integrate classroom instruction closely with museums and their collections. In fact, a good deal of careful investigation will have yet to be undertaken before the museum can be used for liberal-arts subject matter as, for instance, a library is used.

The Cooper Union is in a unique position with respect to an investigation of this kind, for it numbers among its divisions not only a School of Engineering and an Art School but also a Museum for the Arts of Decoration. Through the Department of Humanities, which offers the Humanistic-Social subjects to the art and engineering students, it would be possible to carry on research into the ways in which the Museum can meaningfully supplement classroom instruction in history, anthropology, literature, the arts, and philosophy.

An initial inquiry into such an educational relationship has already been made by the Department of Humanities in cooperation with The Cooper Union Museum; and whereas the use to which the Museum has been put so far is modest and exploratory, the educational results have been rewarding.

Since Engineering students at The Cooper Union study the cultural history of western civilization as a part of their requirements in Humanities, the Museum, at the request of the Department of Humanities, has prepared exhibitions especially designed for student use and has organized tours of the Museum wherein a main theme from cultural history has been emphasized.

The relationship of the Cooper Union engineering student with the Museum begins early in the student's collegiate career. Sometime during the first semester of the first year the Museum staff conducts the sections of English I through the Museum on a two-hour tour which acquaints the student with the purpose and contents of the Museum and with the various facilities which it can place at the disposal of the student. From this tour the student is intended to gain an initial acquaintanceship with what the Museum can offer him as a collection of objects revealing, among other things, something of the history of taste and of styles or as a source of pictures, books, and other materials useful in research.

In this tour, the objective of a general orientation to the Museum is combined with a particular emphasis on a display of material illustrating the historical continuity and the perennial appeal and vitality of the classical styles bequeathed to Western culture by the ancient world. This focus upon what the Museum can do in the way of revealing the styles of an historical era and their relationship to those of other periods is carried on into the student's later work as the Museum continues to serve as a tributary to his humanistic studies.

The Humanities Civilization sequence begins with an investigation into the cultural ideals of ancient Greece and Rome. On several occasions the Museum has prepared exhibitions from its collection of Greek and Roman materials, and members of the Museum staff have lectured to the Engineering students on the significance of the objects displayed.

In their study of the cultural history of the Renaissance and the eighteenth century, students have a two-hour session in the Museum Library which gives them, through books, pictures, and music, an opportunity to examine in tangible form some of the styles and motifs of the Baroque period.

Besides these contributions to the course work of the Civilization sequence the Museum has from time to time offered special exhibitions that have made available for study outside of classroom time some material relevant to one of the Humanities courses. Characteristic of this kind of less formal teaching has been a display of masks. Freshman Humanities classes engaged in a study of primitive cultures found in this exhibition a chance to see some objects of primitive art and of magico-religious practices.

On another occasion the Museum showed students studying the Middle Ages a film, *The Life of Christ,* drawn from Dürer etchings. At the same time the Museum displayed its own collection of Dürer's graphic work.

Again, as a part of the study of medieval culture, use is made of the Museum's textile collection and Museum staff members give a special lecture on the design and making of tapestries, following a field trip to the Cloisters, where students have seen the Unicorn and the Nine Heroes tapestries.

As an aid in the study of Contemporary Fine Arts, students in Contemporary Literature, Painting, and Music (an elective for Engineering seniors) enjoy a two-hour session in the Print Room, where, for example, they may be shown samples of German Expressionism. The Keeper of Drawings and Prints comments on the pictures and on print-making in general.

Individual students have on several occasions drawn upon the resources of the Museum and the advice of its staff in the preparation of English I or Civilization term papers, and in the writing of critiques.

WELLER EMBLER *and* KINGMAN N. GROVER
The Cooper Union, Department of Humanities

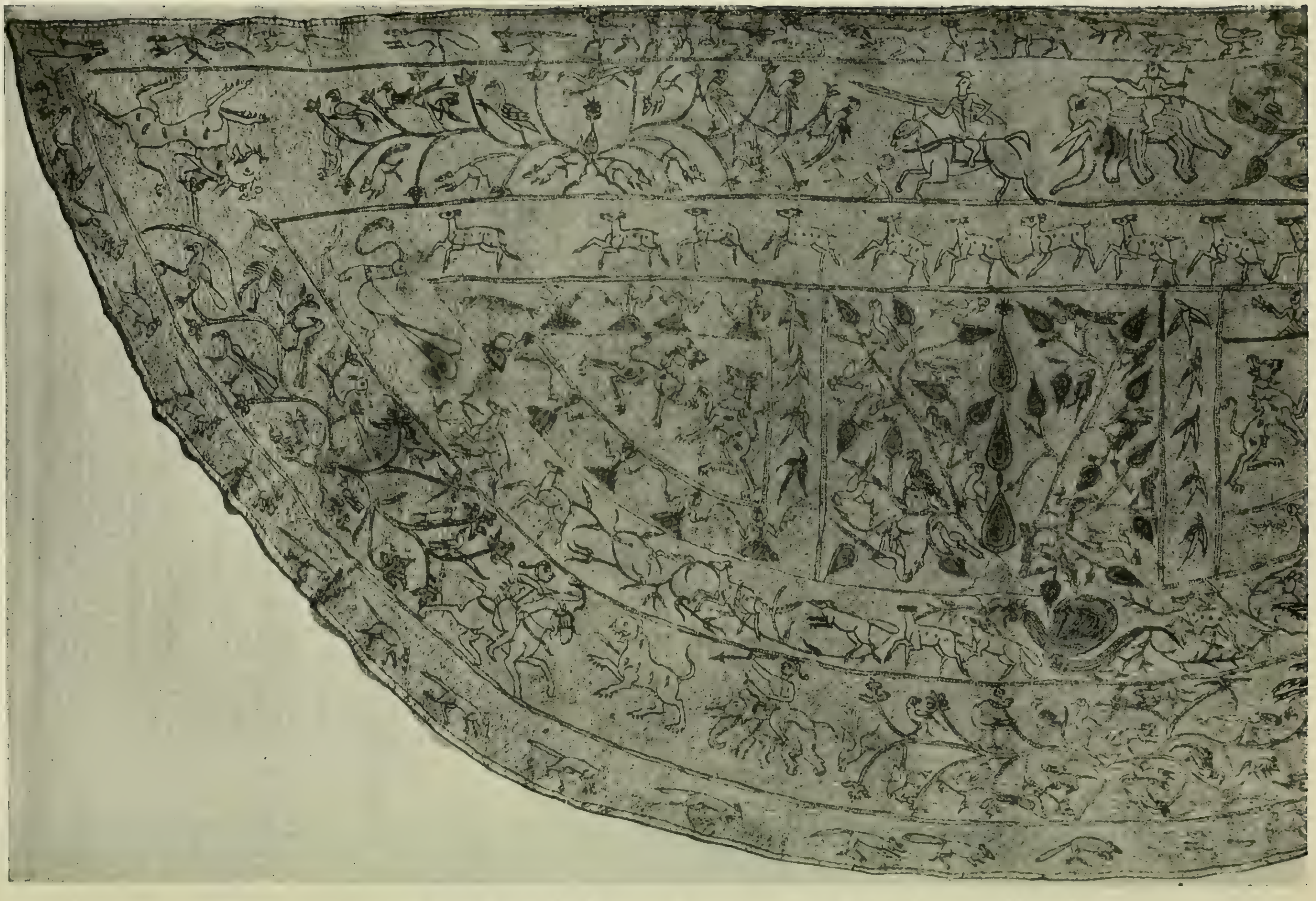


Figure 1. Section of embroidered cape. India, Bengal, possibly Hughli, 17th century. Purchased, Au Panier Fleuri Fund.

INDIAN TEXTILES IN THE MUSEUM'S COLLECTION

The Cooper Union Museum has been fortunate in being able recently to expand its collection of textiles with dyed and painted cottons and related embroideries produced in India in the seventeenth and eighteenth centuries for the European-East India trade and also with contemporaneous examples made in India for domestic use.

The decoration of woven cloths with various forms of painting, dyeing, or printing begins even earlier than recorded history and is seen in every part of the world: as witness the Nazca tie-dyes of Peru dating from before the birth of Christ, the Late Classical figural friezes on cloth, the seventh- and eighth-century Oriental examples from Turkestan and Japan, the medieval Indian, Persian, Russian and European resist and block prints, the eighteenth-century printed cottons and linens of Europe and the American colonies. Reflecting as they do a rich and ancient eastern civilization and showing, too, the particularly inventive mastery of a complex method of cloth decoration by means of painting, and resist and mordant dyeing, these Indian cottons of the Mogul or Indo-Persian dynasty apparently represent a final stage in a product famous for centuries. Certain of the Scriptures use the oriental word for cotton in describing the hangings in the court of Ahasuerus in the Book of Esther. Arrian, a contemporary of Pliny, says that "muslins . . . and cottons . . . sashes striped with different colors . . . purple cloth . . . and muslins the colour of mallows . . . were exported at this time to all the ports on the Arabian and East African coasts."[1] By the twelfth century A.D., the import of Indian cottons into China was at its peak, as shown by customs records, and an account by two Chinese travelers in the early part of the fifteenth century records the importance among the islands and southern coasts of Asia of dyed cottons which these travelers said came from Java and the southwest coast of India. A Portuguese government servant in India in the sixteenth century remarks on the importance of the cotton industry of India, particularly of Gujerat, not only for domestic consumption, but for export to the Muhammadan countries of the west and to the countries of the Far East.[2]

When the Portuguese, Vasco da Gama, discovered the sea route to India in 1498, however, spices were claiming European attention as the outstanding oriental luxury. Portugal and Holland were the first countries to place a firm hand on the East Indies trade in these valuable commodities; but the high prices they exacted shortly led to the development of various other European East India companies. Elizabeth of England issued a charter to the East India Company in 1600, and a half a century later in France the Compagnie des Indes and the Compagnie des Indes Orientales were created in imitation of the English company. Denmark also founded an East India company early in this century, and Sweden about a hundred years later. All these companies engaged in bitter rivalry and sometimes actual battles on Indian and Indonesian soil to bring to their home markets the products of China, India, and the Spice Islands.

The reverberations created in Europe itself in the seventeenth and eighteenth centuries by the exotic imports of these trading companies were profound. Among the most far-reaching of these were the India muslins, silks, and above all, the painted and dyed calicoes, which, about 1670, became the rage for hangings, bed-fittings, dresses, dressing-gowns, mantles, waistcoats, and hat-coverings. English weavers by the mid-seventeenth century were printing textiles in "the only true way of East India printing and stayning such kinds of goods,"[3] and domestic textile-printing, as well as the importation of India cottons, were such extremely prosperous occupations that the Spitalfields weavers of silks and velvets felt their livelihood threatened. In 1700, in response to their unrest, it was enacted that ". . . all wrought silks, Bengals, and stuffs mixed with silk or herba, of the manufacture of China, Persia, or India, or the East Indies, and all calicoes, painted, dyed, printed, or stained there, which are or shall be imported into this kingdom, shall not be worn or otherwise used in Great Britain . . ."[4] In 1720 it became illegal to print cotton fabrics in England and to wear or use printed calicoes, whether domestic or foreign. This act was later alleviated, but not until the end of the century did English textile-printing again proceed without restrictions in the form of stipulations as to material or taxes by the yard on weaver and printer. In France, too, there were a similar fervent adoption of the "indiennes," a flood of domestic imitations and variations, and, finally, stringent restrictions to protect traditional domestic silks and velvets. An edict of October 26, 1686, ordered the destruction of all printing blocks and prohibited the sale after December 1, 1687, of all printed cottons, not only Indian but even French. But the Revocation of the Edict of Nantes had previously forced hundreds of artisans to emigrate, carrying with them the knowledge of the Indian process. They established themselves in Berlin, Bremen, Geneva, Neuchatel, and in the Hautes-Alpes region. The dispersal of the workers was accompanied by an increased and more widespread passion for printed cottons and linens. As frequently happens, the prohibitions served only to increase the demand. The India trading companies also flourished, and their factors gathered thousands of painted cottons and embroidered coverlets to be sold on the European market, at great profits.

This development of a whole industry is amazing in view of the fact that Europe's earliest interest in the sea route to India had been as part of the spice trade, and in view of the fact that the first Indian textiles to come into

England and Portugal with this trade seem to have been, not painted cottons, which were first used by the trading companies in trade further east, but such embroidered coverlets as those listed in the Hardwick Hall inventory of 1603. Contemporary records picture these as "embroidered all over with men and crafts." They are of yellowish wild silk (tussur) in chain and outline stitch on a ground of undyed cotton, and have long been thought to have been made in Goa, the great Portuguese trading center grown up in an older Indian city on the Malabar Coast. This origin has recently been questioned by Mr. John Irwin, who produces strong arguments for a provenance in Bengal, which contemporary records show was specializing in commercial embroidery for the European markets in the sixteenth and seventeenth centuries.[5] The Cooper Union Museum has several interesting embroideries of this type, including a small cape[6] and some coverlet sections.[7] The Cooper Union Museum cape (Fig. 1) does not show the European "men and crafts" or the Classical or Old Testament scenes common to so many of the Bengali embroideries of this type. Its semicircular form is filled by a number of borders framing a central square flanked by segments of circles. Indian birds and animals and serpents, some highly stylized, disport themselves within these various areas in great profusion, sometimes confronted in combat, sometimes climbing the trunk of a palm, or perching in the symmetrically twining branches of a tree with tear-shaped leaves; native huntsmen on elephants or horses gallop along occasionally; one set of bands, suggesting a seated dance, contains a row of seated women with heads turned at varying angles and raised arms linked by the graceful arc of what may be a branch or a wand; the woman at the end of each row holds now a palm frond or again a leaf. Its designs are wrought in the characteristic golden tan wild silk in fine chain stitch, with outline and knot stitch fillings and accents, on a cotton ground now mellowed to biscuit color and covered closely with a fine scrolling leaf pattern in the same silk in outline stitch. A certain amateurishness of drawing which has impressed Mr. Irwin makes him suggest that it may have been worked by native converts in one of the Portuguese convents in Hughli, a Portuguese port in Bengal, rather than by the local village women who probably produced most of this type of embroidery for the representatives of the various European trading companies. While a black and white photograph may emphasize this quality in the drawing, it scarcely does justice to the liveliness, vivacity, and naïve grace of the details, to the assured and exquisite finesse of the ground arabesque, and to the warm subtle tone of the cape as a whole.

The coverlet sections in the Museum collection are more characteristic of the general type, with a disposition of design suggesting contemporary European silks — vertical and horizontal rows of large scalloped medallions formed

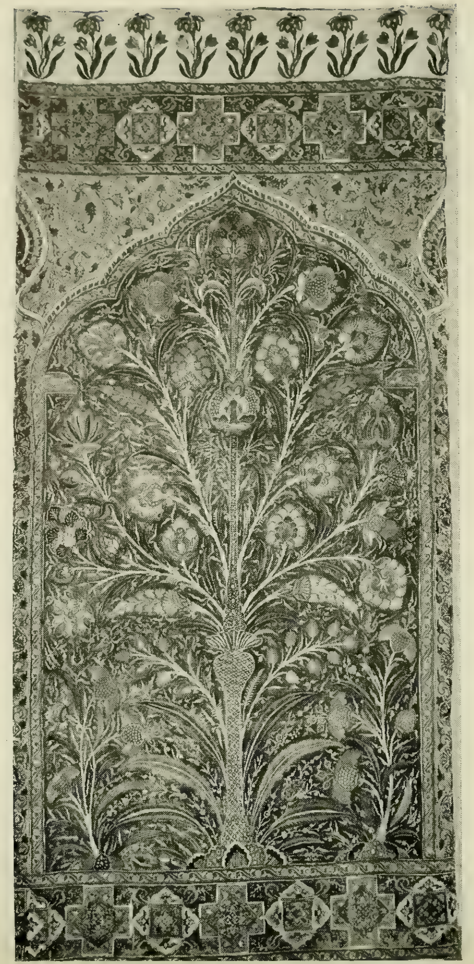


Figure 2. Panel, probably from an inner tent wall: painted, dyed and block-printed cotton. India, Golconda, second half 17th century. Purchased, Au Panier Fleuri Fund.

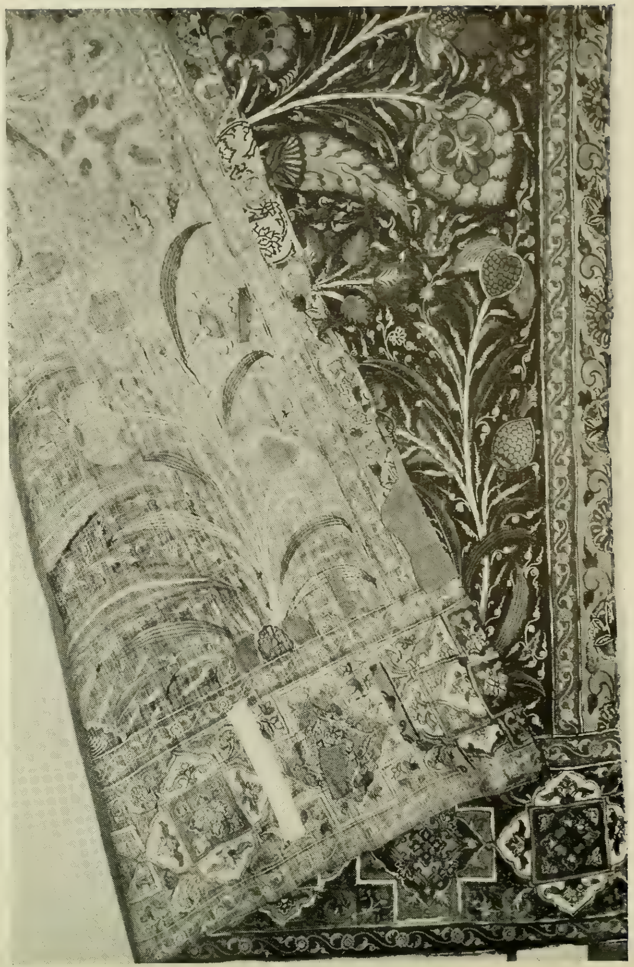


Figure 3. Detail of panel in Figure 2.

by interlacing dotted bands and framing various lively episodes with Indian and European figures on ships, riding on elephants or various animals, sometimes with Portuguese inscriptions, on a ground filled with smaller figures, floral motives, birds, and animals. They are worked in coarse yellow silk chain stitch on an undyed cotton ground. Though this type of embroidery was copied in both England and Portugal in the seventeenth century, it was much less far-reaching in its effects on the textiles of the west than were the dyed and painted cottons which made their first appearance in Europe in limited numbers with these same yellow chain-stitch embroideries.

Actually, the earliest Indian painted and dyed cotton in the Cooper Union Museum collection[8] dates from the second half of the seventeenth century and is a type noted with interest by European travelers in India, made in Golconda in south central India for the Mogul court there, not for export (Fig. 2). Sir Thomas Roe, "a man of extraordinaire parts" sent out by the English East India Company "to prevent any plottes that may be wrought by the Jesuits,"[9] described in his journal (1615-1618) the double sets of tents in the Indian princes' camps "compassed in with Pales of Pintadoes."[10] "The tents of the King when on a journey" are described in more detail by Aurangzeb's European physician, Bernier, as having linings of ". . . printed calico representing large vases of flowers."[11] Obviously part of a large horizontal band of many such panels, this vertical panel in the Museum collection contains a characteristically Mohammedan mihrab or lobed niche which encloses a tall vase supported by a small group of decorated mountain forms and containing spreading sprays with large decorated flower-heads and long serrated leaves which fill the arch. The wide top and bottom borders contain continuous bands of decorated medallions suggesting Persian rugs of the period, as do the scrolling floral motives in the spandrels. Across the very top of the panel is an undyed area with a row of identical lily-like flowers with apparently block-printed outlines. It is interesting that the simple diapers filling some of the mountains and parts of the main tree trunk are seen also in the earlier resist-dyed cottons found in Fostat, for which Pfister strongly argues an Indian provenance. Except for the block-printing at the top, the Museum panel appears to be done in a complicated combination of resist and mordant dyeing, with some hand-painted details (Fig. 3), an operation approximating that described in detail by Père Coeurdoux, a Jesuit priest in Pondicherry, in his letter to a confrère in Europe in 1742.[12] The amazing variety of colors includes reds, sky blue, dull yellow, green (blue over yellow), orange (pink over yellow), aubergine, and reserved areas, all outlined in black, dark brown, or dark red, on the reddish-brown ground of the central mihrab, and on the deep golden yellow ground of the spandrels. Delicate linear reserve patterns of small flower sprays and scrolling tendrils

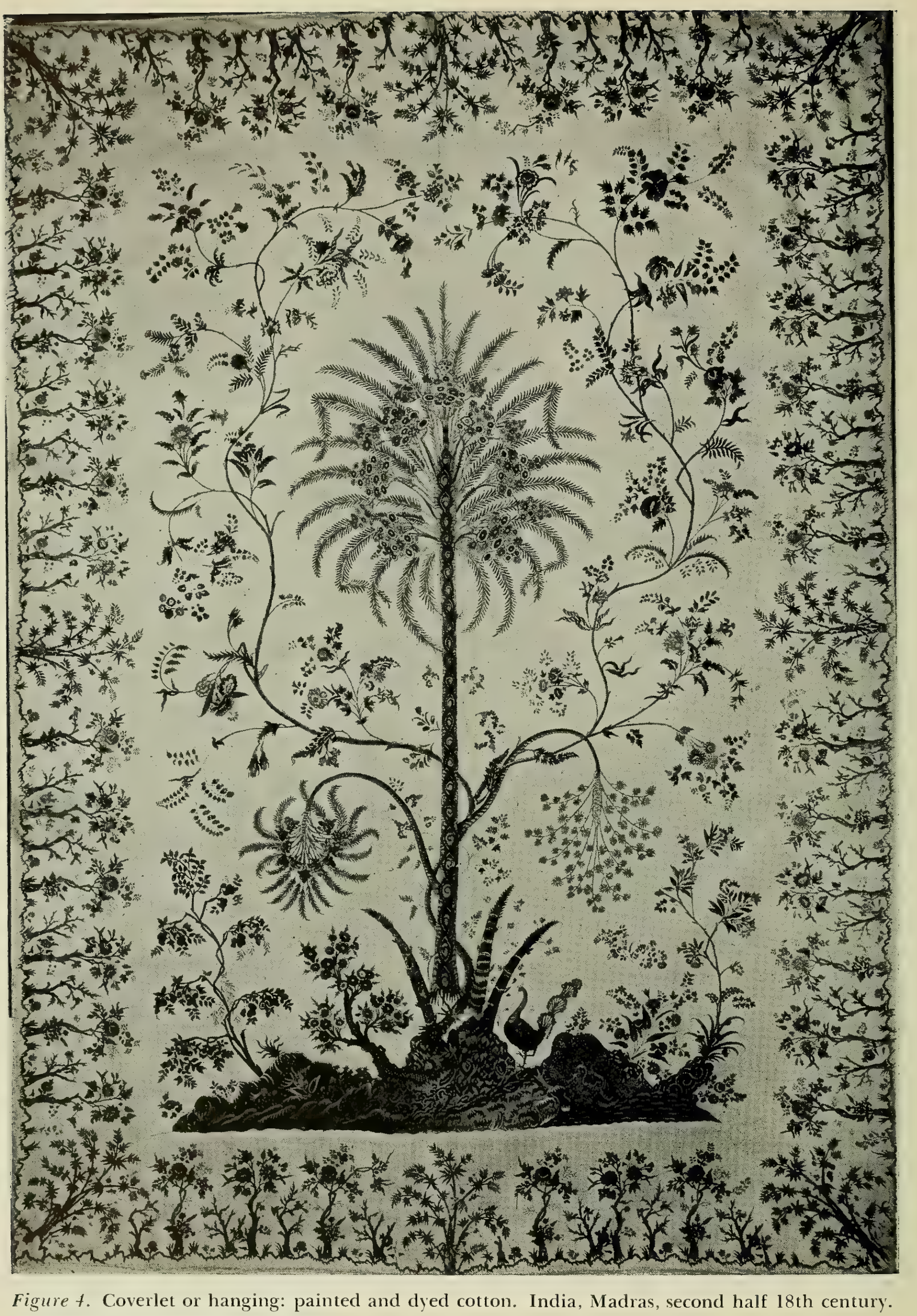


Figure 4. Coverlet or hanging: painted and dyed cotton. India, Madras, second half 18th century. Purchased, Au Panier Fleuri Fund.

enhance the main design of the vase and flowers and, with small colored Chinese cloud-bands similarly enhanced, fill this brown ground. The piece is unseamed, with plain cloth selvages on the long edges dyed sky blue. A panel apparently in the same series, with a date palm rising from a vase into a mihrab on a dark red ground, is at present in the New York art market, and related tent or palace fittings are the small cushion-covers in the Metropolitan Museum of Art; on these last, much smaller and more delicately drawn humans, birds and animals are mingled with the trees and flowers, with a medallion and arabesque border, done in the same range of colors and the same elaborate technique.

European trading companies, with their instructions to their representatives in India for ". . . the more and skillfuller artists the better to make paintings of your broad Bafts of good brisk colours, the works of any sort of rambling fancyes of the country . . ."[13] soon were assembling and dispersing in such centers as Surat, Ahmadabad, Madras, Masulipatam and many others, a mass of material for the European market. A handsome coverlet or hanging in the Cooper Union Museum collection[14] of the type from Madras in southeast India in the third quarter of the eighteenth century[15] gives a Chinese cast to the ancient Near Eastern tree of life seen above in a Golconda version, here painted and dyed in a variety of fresh, rich colors on a fine undyed cotton ground (Fig. 4). A palm tree is centered in a vertical panel with fronds radiating in an oval around flower clusters on shorter stems around its top; the base of the trunk is frayed, suggesting roots, and terminates (for reasons that still defy the modern investigator!) just above a mound whose various areas are decorated with great imagination and variety; large fanciful bamboo shoots and variously flowering small trees spring from this, and a peacock with rising fantastic tail appears in profile on the right, facing the tree. A flowering vine also rising from the mound twines around the stem of the main tree and divides into two stems meeting above it, thus forming a flowery serpentine frame, and also gracefully filling the rectangular center of the hanging. The four edges are bordered with a deep band of much smaller flowering trees, with similar frayed trunk bases and with a bamboo tree in each corner and in the center of each side, all rising from a shaded continuous scalloping ground-line close to each edge of the hanging (Fig. 5). The colors are shades of red, blue, green, aubergine, yellow (now much faded), in brownish-aubergine outlines on an undyed cotton ground now a light biscuit color. It is completely unseamed and has narrow plain cloth selvages with double warps on the long edges. We have no proof of how cloths of such width (this one is more than seven feet) were produced and can only suppose it to have been the product of a loom such as those that required the services of a man, his wife, and one boy or girl.[16]

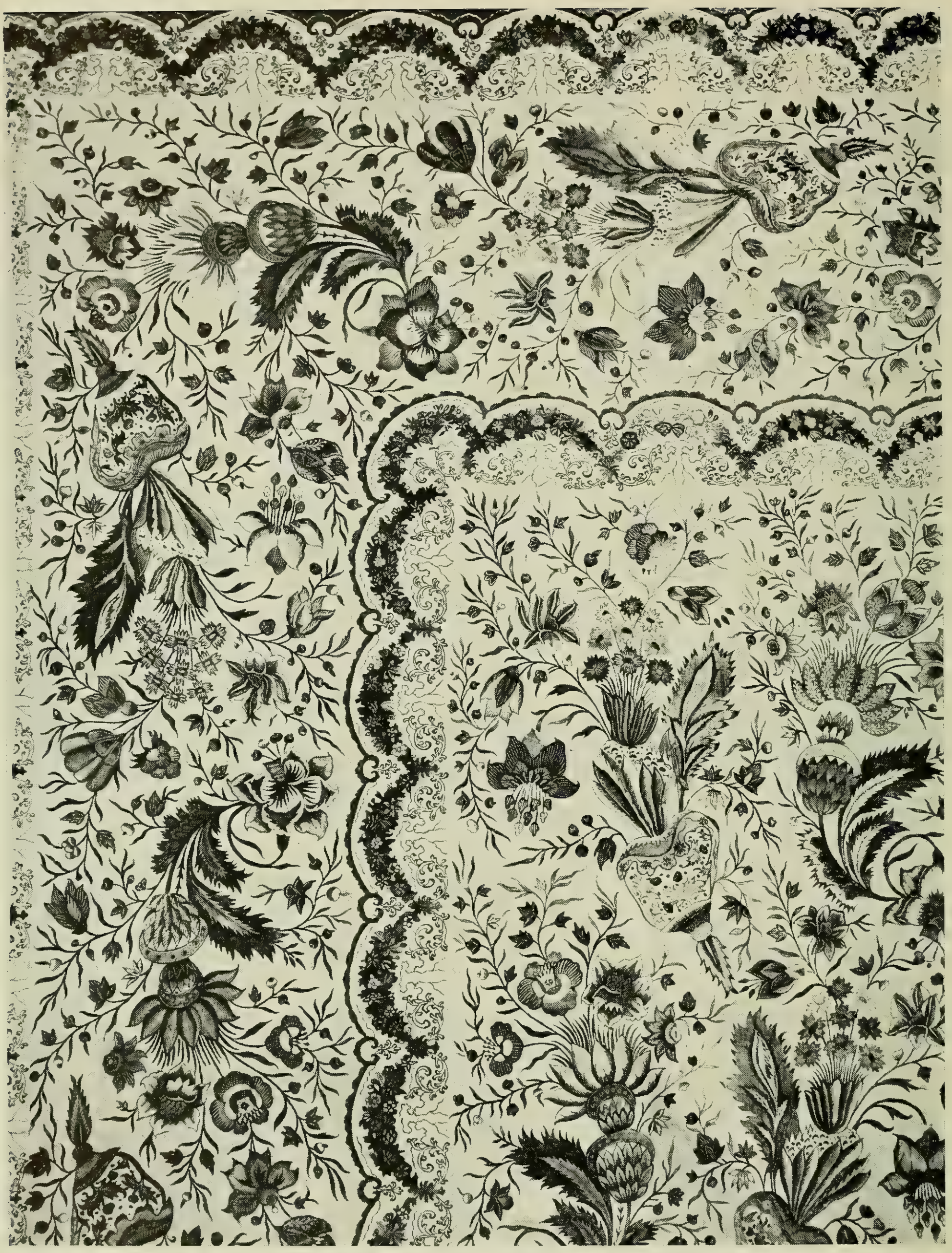


Figure 6. Section of coverlet: painted and dyed cotton. India, second half 18th century. Purchased, Au Panier Fleuri Fund.

The other hanging,[17] with part of one border cut to shape it to coverlet use, has a design perhaps more unusual in these large cottons (Fig. 6),[18] suggesting a certain relation to a series of silks generally considered European and dating early in the century, which might here be arbitrarily designated as "fantastic" because of their characteristic juxtaposition of unexpected motives.[19] Two large curving sprays with various large, carefully shaded flowers and large curving jagged leaves, and smaller, more delicate subsidiary sprays of flowerets, buds, berries – one spray terminating in a fantastic bulging decorated jar with a leaf base, and one confined in two places by dotted bands – alternate vertically in the wide border and horizontally and vertically in the rectangular body of the coverlet, again filling both areas with an air of finality and grace. Wide guard borders set off the main border on inner and outer edges with continuously scalloping festoons, from which branch off at each high point delicate lobed leaves scrolling inward and with a filling of wavy lines suggesting seaweed.[20] These festoons, seemingly so European in character, are actually widely used in medieval Indian sculpture and architecture in a more stylized form, perhaps having come in from the classical West at a much earlier date. The arrangement of design elements, however, suggests an adaptation to eighteenth-century European taste. The colors are shades of red and blue, and a soft aubergine from a combination of the two, with touches of a much-faded yellow; the outlines are red and pale aubergine. The repeats are varied by changing the

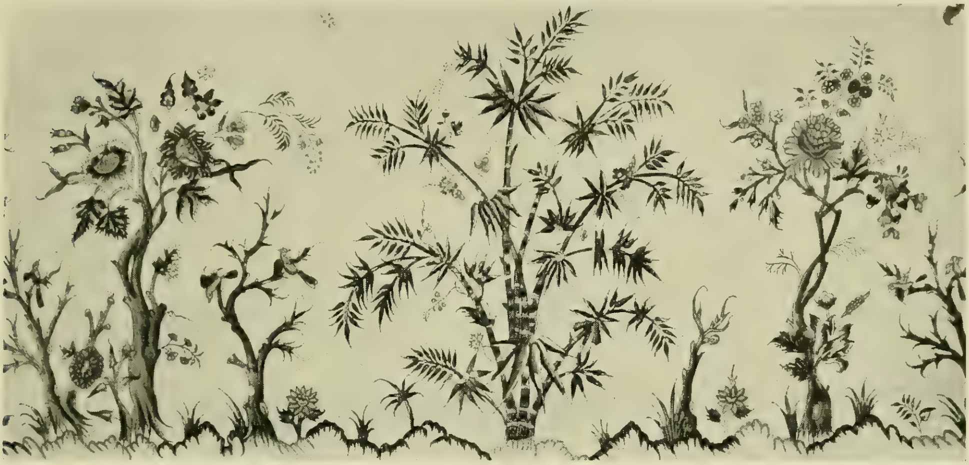


Figure 5. Detail of border of panel in Figure 4.

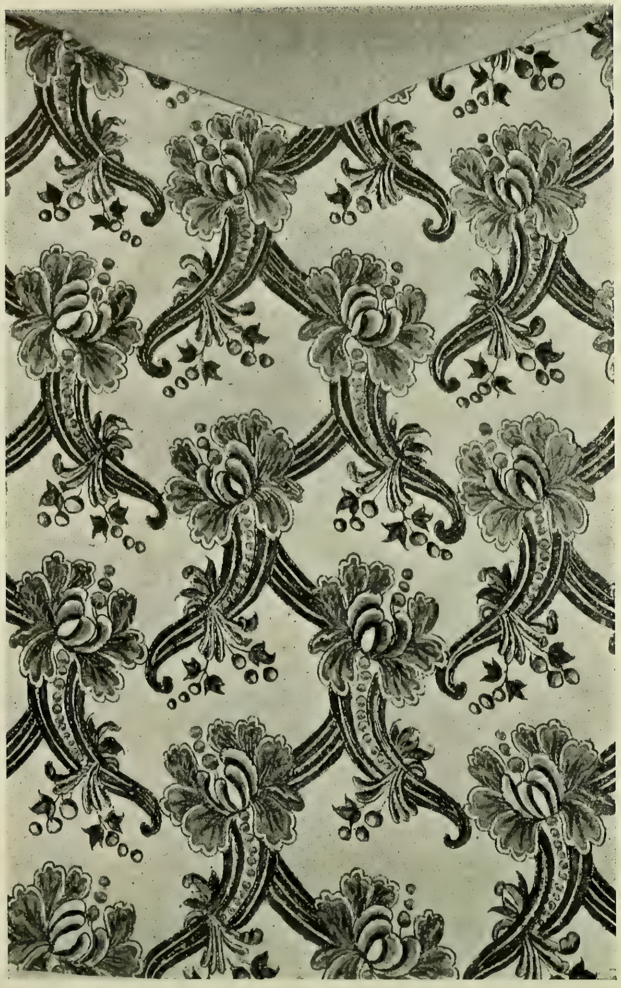


Figure 7. Painted and dyed cotton with details in gold leaf. India, 18th century. Given by J. Pierpont Morgan.

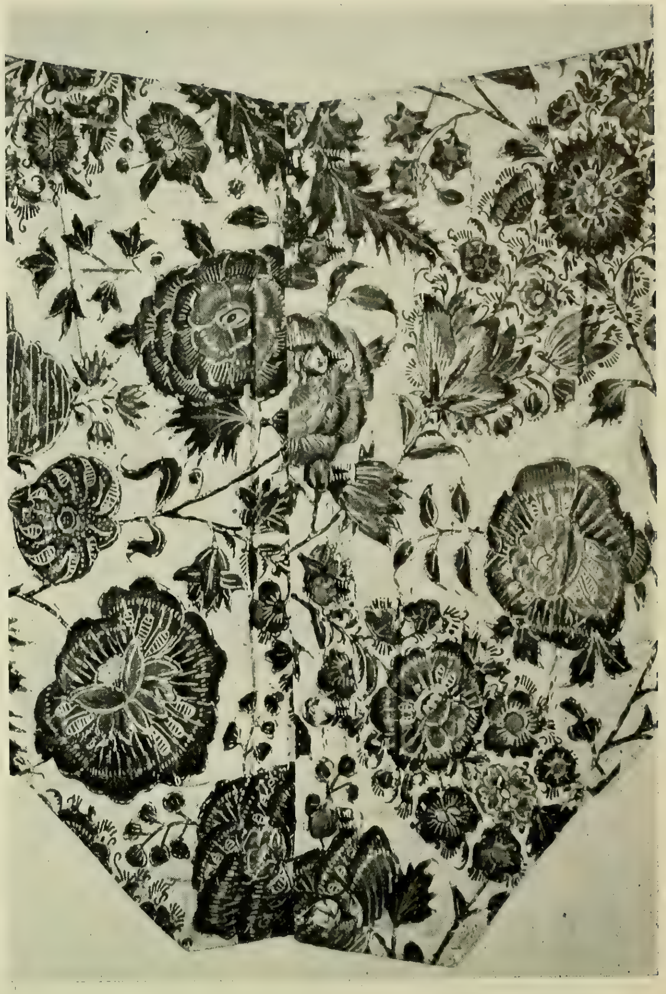


Figure 8. Bodice-front: painted and dyed cotton with details in gold leaf. India, 18th century. Given by Mrs. Abram S. Hewitt.

grouping of these colors. While the general effect is fresh, spirited, and graceful, closer examination shows that the drawing is becoming cursory; the filling decorations, varied with such infinite care on the earlier painted cottons, here are still effective, but desultory and much simplified. The pressure to produce exerted by the trading companies led to greater and greater exploitation of the native workers, who ultimately had no choice but to work at top speed and very low pay for a local company representative. Such working conditions were bound to lower the quality of the product of even the most skilled and originally enthusiastic craftsman. This large piece, too, is unseamed and has a plain cloth selvage on one long edge.

Another coverlet,[21] also incomplete, in the Museum collection, is interesting because its center is made of a width (ca. 40½″ with plain selvages) and several pieces of a Jouy woodblock print of about 1780-1790, a floral repeat in blue and red on undyed cotton inspired by the "indiennes"; while its borders are broad pieces of an actual Indian painted and dyed cotton border with a large, bold and somewhat coarse scrolling flower band in blue, red, aubergine on a red ground, and remaining areas of the field showing part of a decorated mound and a medium-scale and uninventive floral repeat. One small rectangular area in this pieced coverlet section is a French floral print in brown and bluish red on a *picotage* ground with linen warps and cotton wefts of the type required by governmental restrictions in certain periods of the European cotton-printing industry. This piece, with its different parts, represents in brief a summary of East India cottons and their effect on Europe.

The dress cottons in the same painted and dyed technique, so adored in Europe that ladies were known to have had their "indienne" mantuas lined with velvet or cloth-of-gold,[22] are also delightfully represented in the Museum collection. One[23] shows a medium-scale, ingeniously-planned repeat of a stylized flower-head on the top of a gracefully curving cornucopia form decorated with graduated dots and a little sprig of blue berries (Fig. 7). These forms are planned to curve left in one horizontal row and right in the next, and a serpentine band of the same reddish brown as the cornucopias underlays each vertical row, so that an ogival ground-plan accented by the flower-heads is subtly suggested. Gold leaf on a gum base originally ran along all the main lines of the design, and enough of it remains to give a certain delicate opulence. A bodice-front[24] with self-covered buttons (Fig. 8) shows a rich, freely twining pattern of variously decorated flowers, feathery pointed clusters of flowerets, and various leaf forms, in blue, red, green, and yellow, with much reserved filling decoration, on an undyed cotton ground. The same remnants of gold-leaf accents as on the first piece add sparkle and richness. A third flowery cotton[25] possibly from a quilted

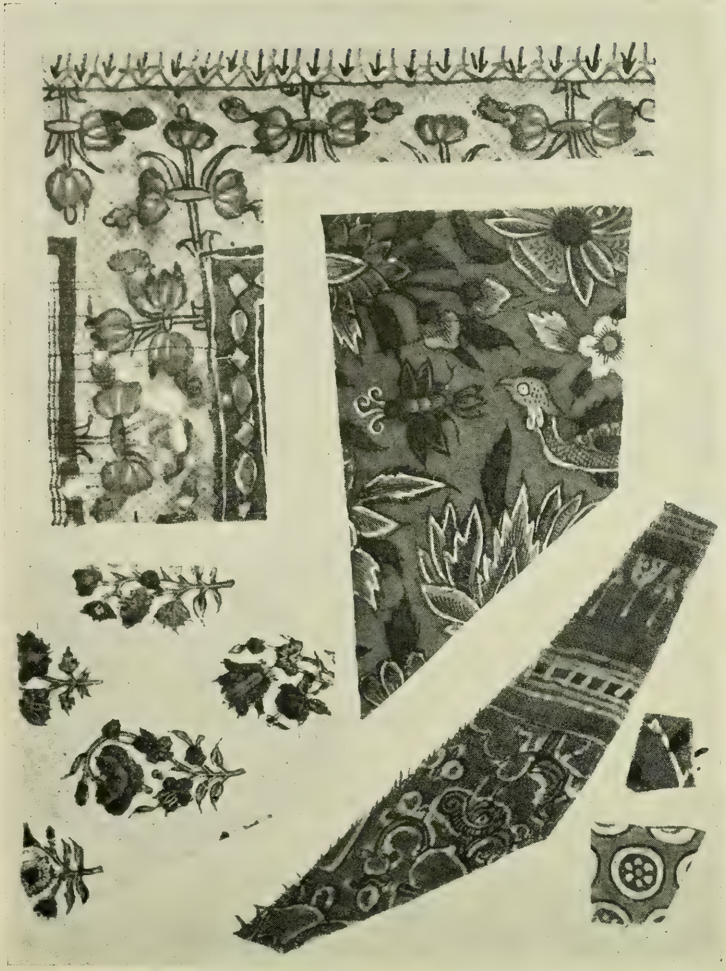


Figure 9. Page from sample-book showing painted and dyed cottons. 17th-19th centuries. Given by Francis Lathrop.

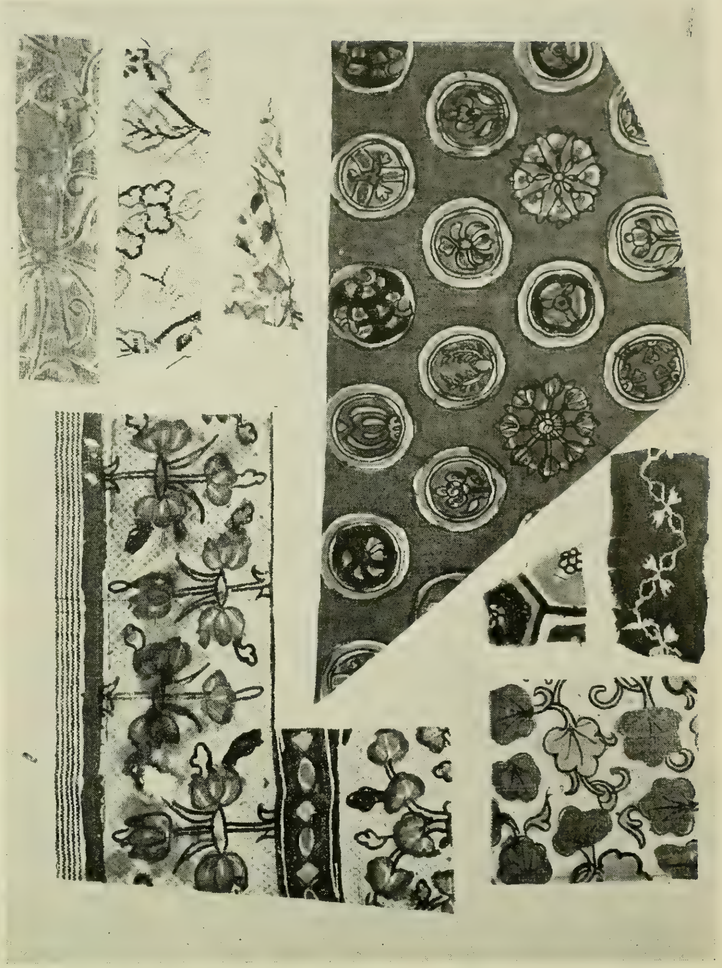
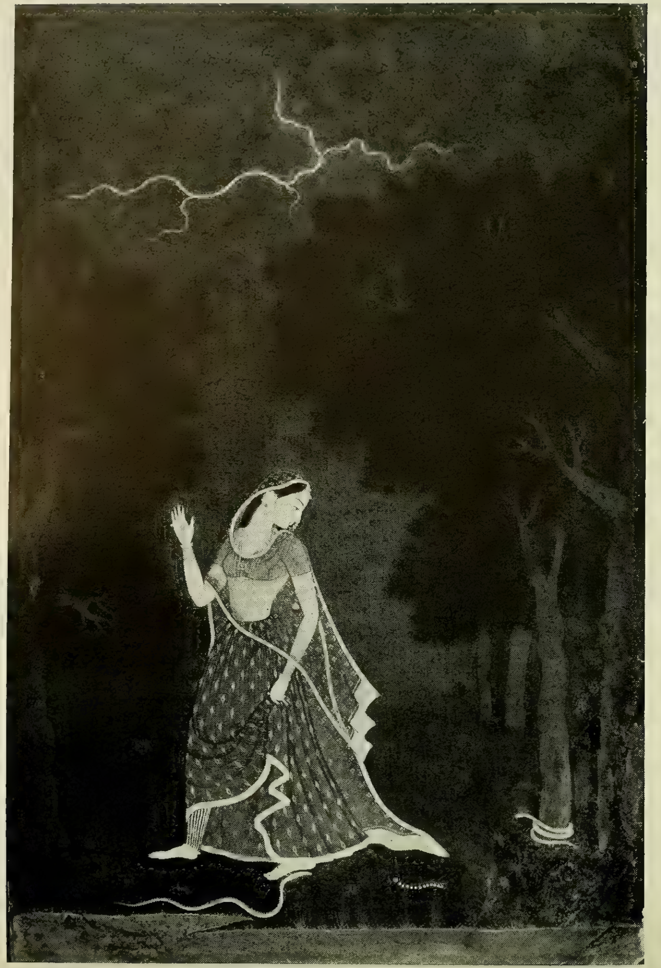


Figure 10. Page from same sample-book showing painted and dyed cottons, Japanese silks, 17th-19th centuries.

petticoat, has sprays and sprigs of incredible variety and fantasy, apparently closely scattered by a fortuitous hand but actually the result of a carefully planned repeat of unusual size (about 32″ x 15″) and with many elements.

Stewart Culin, in his entertaining account of his search for painted cottons[26] tells how it started when on one of his visits to Japan he became interested in the prized Japanese dyed cottons, called *sarasa.* In this same article, he illustrates several of these cottons with small all-over patterns of many sorts. Japanese tradition linked these originally with India, though by the time of Mr. Culin's visit, early in this century, the Japanese recognized Japanese, Indian, and Chinese *sarasa.* A sample-book[27] given to the Museum by Francis Lathrop, a contemporary artist and co-worker with William Morris and his group who later came to New York to live, casts an interesting light on the subject (Figs. 9 and 10). Bound in Japan, it contains, pasted on silvered, folding pages, a large number of textile samples. Along with unmistakably Indian painted and dyed cottons of Golconda and other domestic types, and floral cottons with gold accents of the type produced for the eighteenth-century European market, are cottons in the same dyed and painted technique presenting Japanese patterns.[28] Mingled with these are stripes, plaids and pin-checks which might be Japanese or Indian, pieces of Javanese batiks, and swatches of equally unmistakably Japanese silks ranging in date from the seventeenth through the nineteenth centuries. As we have seen above, textual references tell us that India exported cottons to the Far East from an early date, but whether the dyed cotton samples with Japanese motives shown here in such teasing abundance represent one more Indian adaptation to the foreign market, or whether they represent a Japanese adoption of an admired and sought-after technique and product, there is no final proof. Skilled tie-dye and resist-printing unquestionably native to Japan and in an utterly different style are beautifully represented in the earlier Shōsō-in material. The grouping here seems to suggest an Indian provenance for all these dyed and painted cotton samples through their obvious stylistic and technical identity, even though European taste is catered to in one group, various local Indian tastes in another, Japanese in another.[29]

The painted and dyed cotton coverlets and hangings of the seventeenth- and eighteenth-century European trade discussed above are paralleled by a group of embroidered ones with similar designs in exquisitely fine polychrome silk chain stitch on a ground of undyed cotton, usually in fine fancy cloth or fancy twill weave (Fig. 11). Sections from these in the Cooper Union Museum collection emphasize that they are as rich in fantasy and invention and with even more skillful drawing and shading than the best of their painted counterparts.[30] It is interesting to see the guard strips and



Courtesy of the Museum of Fine Arts, Boston

Figure 12. Miniature painting: Abhisārikā nāyakā in a night of storm. India, Rājput, Pāharī, ca. 1800. No. 17.2653 in the collection of the Museum of Fine Arts, Boston.

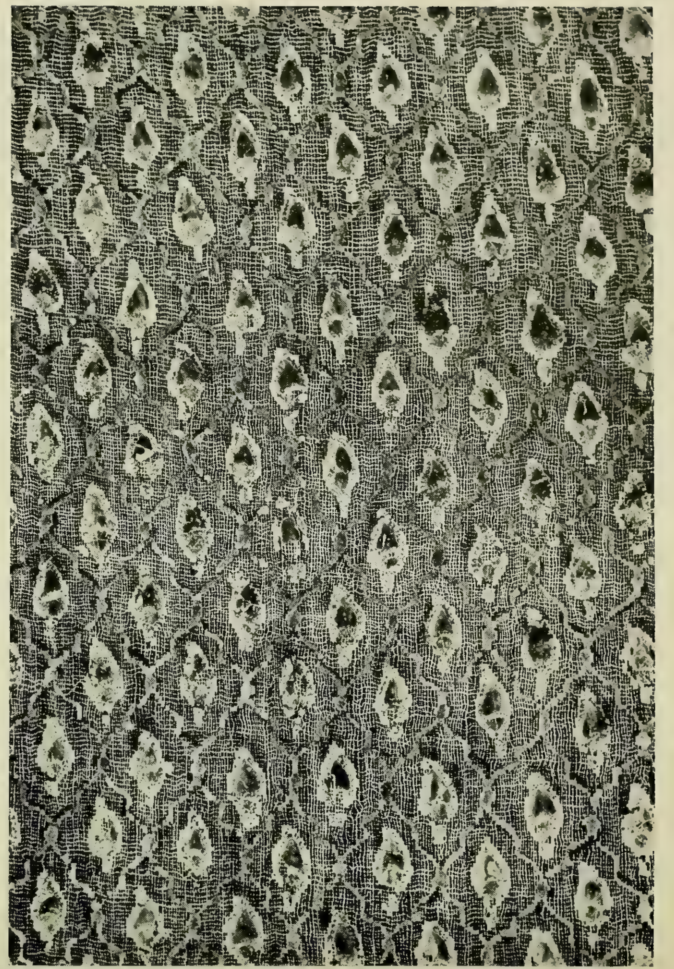


Figure 13. Sheer cotton decorated with colored enamels, gold and silver leaf. India, 18th century. Purchased, Au Panier Fleuri Fund.

the accenting border palmette of one of these[31] are also present in the border of a painted cotton in the Musée des Arts Décoratifs in Paris[32] and the symmetrical, voluted central motive from the same closely echoed in a silk embroidery on yellow satin in the collection of the Royal Ontario Museum for Art and Archeology which is there considered a Chinese version made at Macao for the Portuguese.[33] Apparently parts of patterns were freely exchanged and recombined forming new arrangements to please various markets.

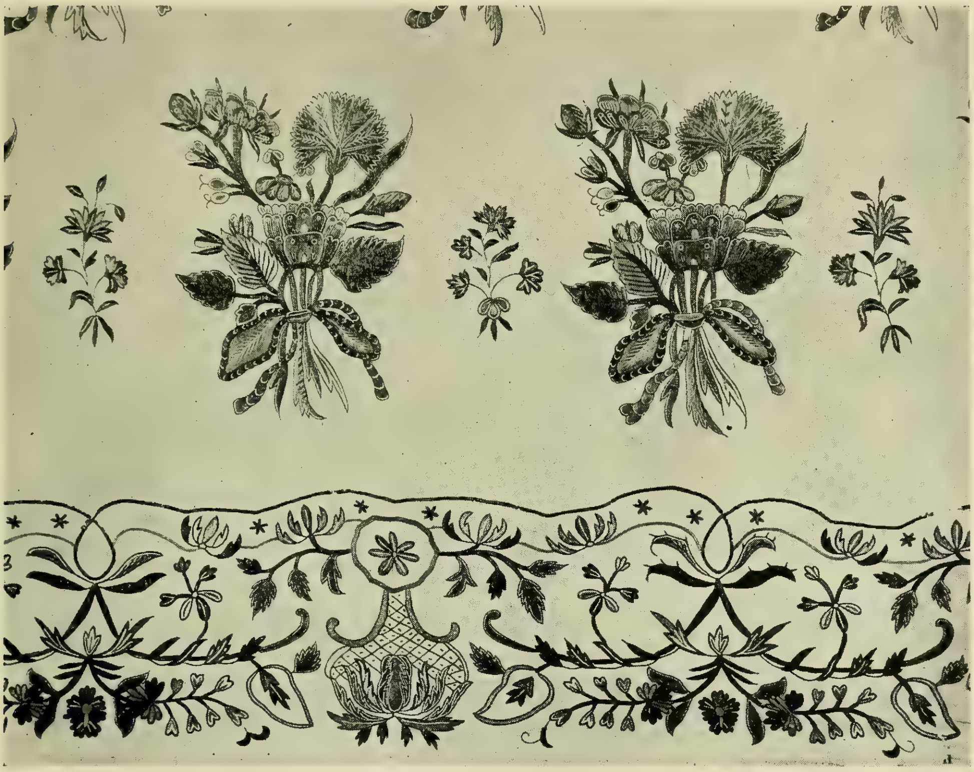


Figure 11. Section of coverlet embroidered in polychrome chain stitch on fine cotton twill ground, India, 18th century. Purchased in memory of Mrs. John Innes Kane.

Besides the foregoing textiles, the Museum has a small group of exquisitely sheer cottons[34] surely related to the Dacca muslins that evoked the names of "dew of evening" and "running water," with tiny all-over designs, some printed and painted, some in enamel or gold and silver leaf. These have been attributed to Dacca in Bengal or to Rajputana. Also, as we have noted above, Gujerat, south of Rajputana, had a long tradition of printing in gold and silver leaf on cotton and silk. In any case, these show the taste and the type of decorated cottons made in Mogul India of the seventeenth through the nineteenth centuries, for turbans and saris and other domestic use (Figs. 12 and 13). So beautiful are these that it is strange that they, too, did not become a European passion, if not earlier, then at the time when embroidered muslins of arresting thinness were the delight of the Empire ladies.

The Indian fabrics described here are, it is true, small in number and perhaps somewhat limited in range, but they give an idea of the new design resources, the almost unparalleled richness of fancy and ingenuity of technique that so profoundly influenced western textile design and production. So much of their design vocabulary has been absorbed into our own daily surroundings that these motives and combinations now seem like familiar friends rather than exotic visitors from a foreign civilization. The Museum is happy in this recent development of its resources and hopes that it may be continued farther.

JEAN MAILEY

NOTES

1. Sir George Birdwood. The Industrial Arts of India (London, 1880), page 243.

2. R. Pfister. Les Toiles imprimées de Fostat et l'Hindoustan (Paris, 1938), pages 13-14, quoting P. Pelliot, *T'oung Pao.* 1933, p. 237; 1915, pp. 250 and 455.
James Yates. Textrinum Antiquorum (London, 1843), page 334 *et seq.*
M. Bézon. Dictionnaire général des Tissus anciens et modernes (Lyon, 1862), vol. 6, p. 161-164.

3. Quoted by G. Bernard Hughes. Old English Chintz, *Country Life,* February 20, 1953, page 497.

4. Quoted by Sir George Birdwood. The Industrial Arts of India (London, 1880), page 271.

5. John Irwin. Indo-Portuguese Embroideries of Bengal, *Art and Letters: The Journal of the Royal India, Pakistan, and Ceylon Society.* New Series, Vol. XXVI, No. 2, 1952, pages 65-73.

6. 1951-41-1.

7. 1947-50-1 and 1951-22-1.

8. 1952-111-1.

9. Quoted by Marguerite E. Wilbur. The East India Company (New York, 1945), p. 64.

10. George P. Baker. Calico Painting and Printing in the East Indies in the XVIIth and XVIIIth Centuries (London, 1921), page 19. *Pintado* is the Portuguese word for *painted,* later coming through common usage to mean *painted cotton.*

11. *Op. cit.,* page 20.

12. *Op. cit.,* pages 11-16.

13. *Op. cit.,* page 34.

14. 1952-118-1.

15. We are indebted to Mr. John Irwin, of the Victoria and Albert Museum, for this exact attribution.

16. Romesh Dutt. The Economic History of India under Early British Rule (London, 1908), p. 238.

17. 1953-21-2.

18. See H. R. d'Allemagne, La Toile imprimée et les Indiennes de Traite (Paris, 1942), for another painted coverlet of this "fantastic" type.

19. This series of early eighteenth-century silks is of unestablished provenance, and is distinguished by unmistakable and highly characteristic traits: unexpected juxtapositions of naturalistic and fantastic fruits and flowers, architectural parts, unidentifiable decorative forms — all of these often with decorated inner areas suggesting those on Indian textiles; often a massive serpentine layout; the use of a great variety of silks and metal threads on a plain or fancy satin ground. See Otto von Falke. Decorative Silks. New York, 1936, Figs. 511 and 512. See also Marian P. Bolles, Old Venetian Brocades, *The Metropolitan Museum of Art Bulletin.* October, 1944, pp. 41-47.

20. D'Allemagne, *op. cit.,* Pl. 220, for a coverlet with identical borders dated by d'Allemagne 1780.

21. 1943-43-51.

22. Baker, *op. cit.,* p. 331.

23. 1902-1-974.

24. 1911-11-7.

25. 1952-113-1.

26. Stewart Culin. The Story of the Painted Curtain, *Good Furniture,* September, 1918, p. 133 *et seq.*

27. 1905-14-1.

28. Culin, *op. cit.,* page 134, top right, for close variant of one of these.

29. Dr. Jiro Harada, Administrative and Liaison Officer of the Tokyo National Museum, and Mr. Masao Ishizawa, Librarian of the Tokyo National Museum, who most graciously looked at this sample-book through the kindness of Miss Pauline Simmons of the Metropolitan Museum, say that, in their opinion, none of the cottons in it could have been made in Japan.

30. 1951-59-1 and 2; 1952-101-7 A and B; 1953-20-1.

31. 1951-59-1.

32. For illustration, see: Henri Clouzot. Les Toiles peintes de l'Inde, *Gazette des Beaux-Arts,* Paris, 1912, at top of p. 282.

33. K. B. Brett. Eastern and Western Textiles, *Bulletin of the Royal Ontario Museum of Archeology; University of Toronto,* No. 19, fig. 11, September 1952.

34. 1952-58-1 through -7.

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Steadily increasing demand for the Museum's publications prompts the inclusion of this summary list in the present issue of the *Chronicle*. At the same time, the Museum wishes to say that it would be grateful to its friends for the return of any copies of its out-of-print publications, not shown in the list, which may no longer be wanted by the present possessors and would be useful for further circulation.

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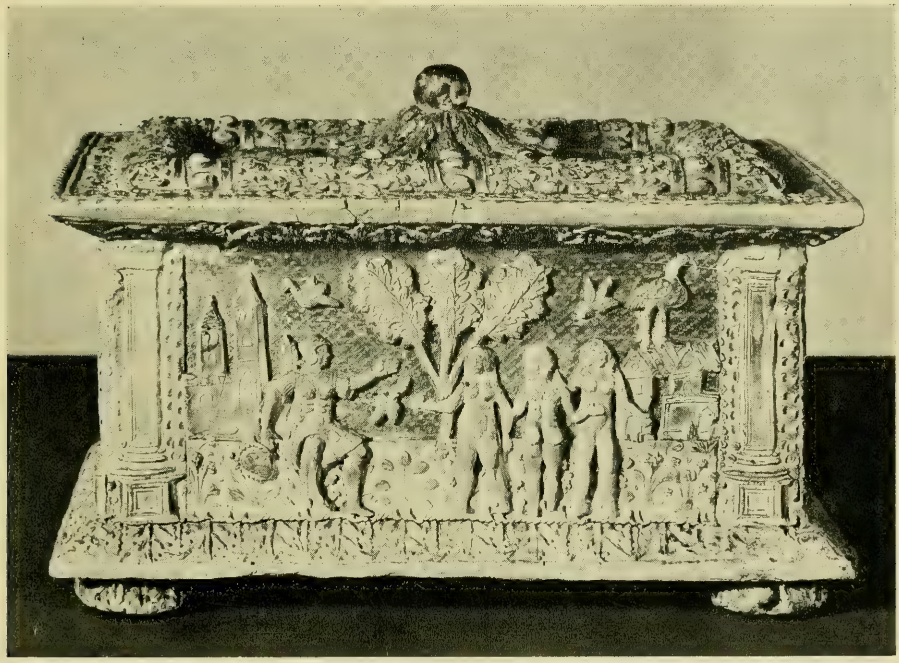

Casket with decoration of mythological scenes.
Carved and gilded pastiglia on wood.
Northern Italy, late 15th century.
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Length, 6¼″.

VOL · 2 · NO · 6 JUNE · 1954

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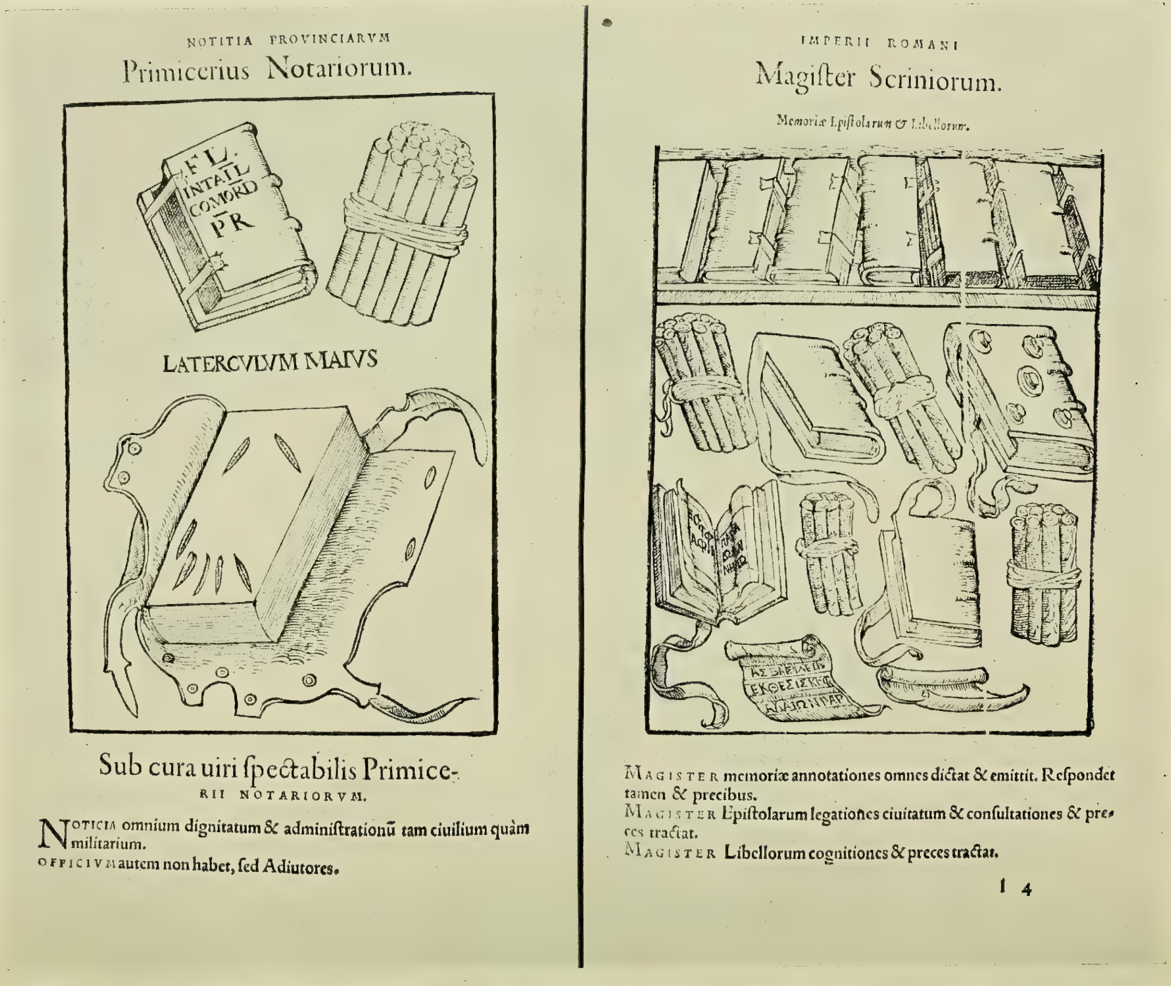
CHRONICLE OF THE MUSEUM FOR THE ARTS OF DECORATION OF THE COOPER UNION

VOL · 2 · NO · 6 JUNE · 1954

The Chronicle has reported annually on a variety of matters, most frequently concerning itself with objects in the Museum's possession; and with succeeding issues its readers will have obtained some notion of the range of the Museum's collecting interests. In the absence of published catalogues or picture books, these accounts are of service, it may be hoped, in increasing the public awareness of the holdings of the Museum. But another activity of the Museum, and one that has developed hand in hand with the formation of the collections, is equally worthy of attention. For this reason the present issue of the Chronicle presents a short history of the Museum Library, which not only is a necessary element supporting the collections but to an unusual degree parallels the collections in serving the needs of the Museum's consultants.

In their choice of books, their assembly of pictorial reference material, no less than in their developing of collections of objects, the founders of the Museum showed clearly the course that the Museum was to follow; and it seems well that the story should be recorded now more fully than it has been in the past.

The Chronicle also records now, for convenience, certain additions recently made to the display collections. No special showing of recent acquisitions has been held since 1950, although during this period many notable objects of high quality have taken their place in the collections. A small selection of these new items is illustrated in the following pages.



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1 4

Andrea Alciati (1492-1550). *Notitia utraque cum orientis tum occidentis ultra arcadii honorique Caesarum tempora illustre uetustatis monumentum, imò thesaurus prorsum incomparabilis.* Basel, Froben, 1552. — Folio 1 3, verso; 1 4, recto. Purchased, Mary Stuart Book Fund.

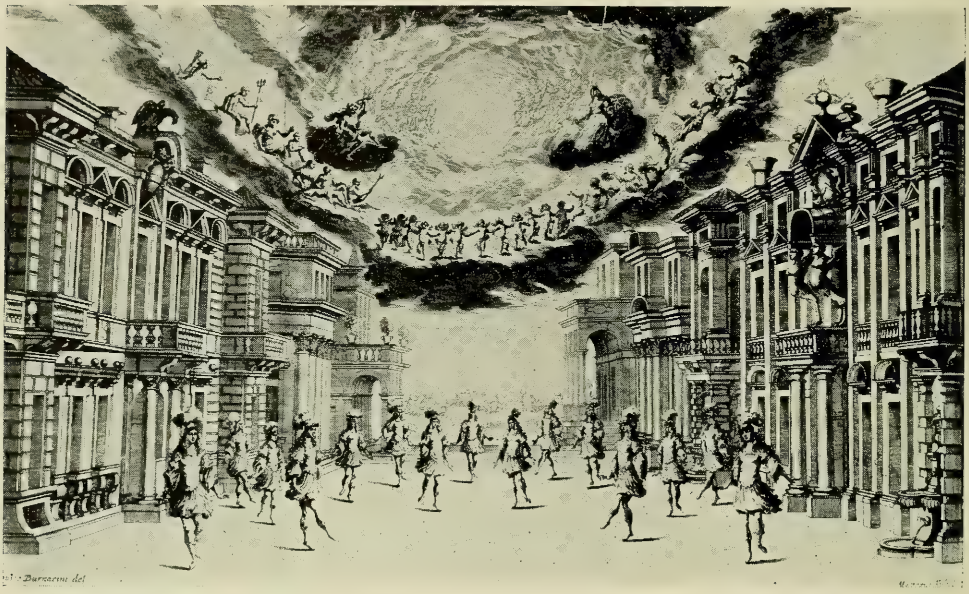
A DESIGNER'S LIBRARY

Among the art libraries of New York The Cooper Union Museum Library occupies a singular position. It has blended the educational mission for which it was organized with the expression of the personal tastes of those two great amateurs of the arts, the Misses Eleanor Garnier and Sarah Cooper Hewitt. Just as the founding of a museum for study and research rather than for browsing and recreation or prestige was a new and forward-looking concept, the Museum's Library, too, was to be a cultural agency intended to serve the community by its usefulness to the individual. The education of public taste was the most important function of the new Museum for the Arts of Decoration and its Library. This was to be accomplished by showing well-designed examples of every form of decoration; the lessons learned from them would result in more beautiful objects of everyday use.

The Museum was fashioned along the lines of the Musée des Arts Décoratifs in Paris. *The Proposed Plan of the Cooper Union Museum for the Arts of Decoration* published in 1896 clearly states its objectives. It was the last step of a development commencing with the Great Exhibition of 1851. This exhibition had shown that although the English had taken the lead in industrialization, the aesthetic quality of their mass-produced goods lagged far behind their industrial proficiency. To remedy this situation certain keen-sighted Frenchmen founded the Musée des Arts Décoratifs, whose purpose was to encourage better design through the study of historical forms. This became also the avowed aim of the Cooper Union Museum, which opened its doors on May 26, 1897, just nineteen years after the inauguration of its spiritual parent museum in Paris.

It is interesting to note that the Misses Hewitt aimed at the improvement of industrial design, whereas in England William Morris and his circle tried to oppose the industrialization of the trades and wanted to turn back the tidal wave of the machine. The Misses Hewitt, equally idealistic, but with more practical common sense, realized that this could not be done. They wanted to train the workman in the perception of beauty. If the designer and craftsman studied the most beautiful objects of the past centuries, their aesthetic sense would be sharpened and their products would be more artistic.

The Library had an important place in this new Museum. Its instructive value was to be as great as that of the collections themselves. Emphasis in the Library was also on visual presentation. It was to become a "Museum without Walls" within the Museum in the sense that André Malraux has formulated it sixty years later, showing in the form of a picture any work of art, regardless of size, material or structure. A succession of pictures would present the complete historical and artistic sequence of a style or an art form, scrapbooks lending themselves most easily to such a project: an "Encyclopedic Scrapbook Collection" would thus constitute a complete survey of all forms of decoration. By making scrapbooks for each medium of the decorative arts and for the architectural styles of every country and period, the Library was to become a huge "Grammar of Ornament." What Owen Jones in a more limited range did in his famous book became, in a way, the objective of the Museum Library, and especially of its Picture Collection.



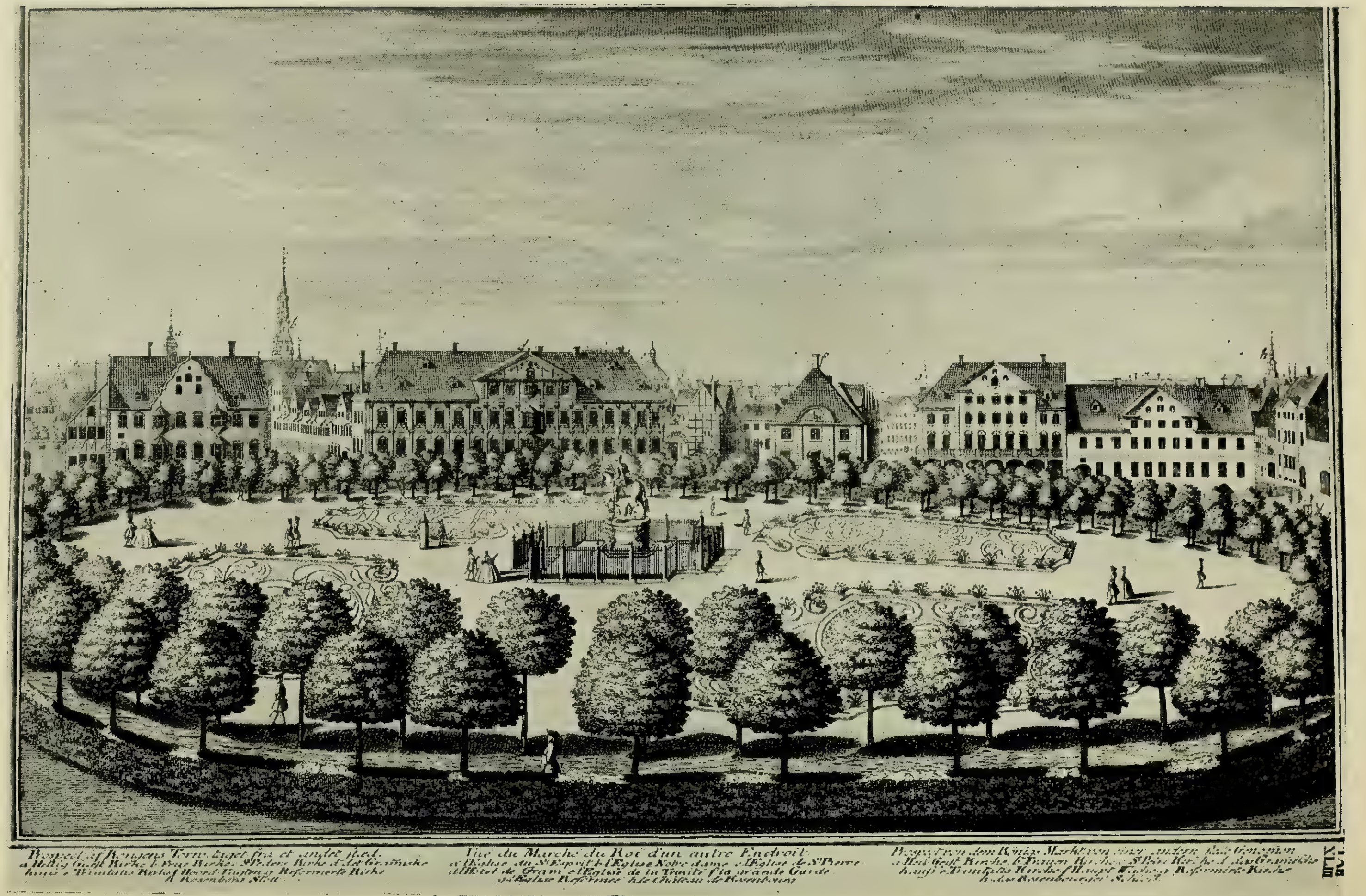
Francesco Sbarra. *Il Pomo d'Oro.* Vienna, 1668. — Pl. 23: Festa Teatrale rappresentata in Vienna per Augustissime Nozze delle Sacre Cesaree Reali Maestà di Léopoldo, e Margherita . . . Scene designed by Ludovico Burnacini (1636-1707). Given by Miss Sarah Cooper Hewitt.

To build up this collection was the earliest Library activity. Pictures from every conceivable source were incorporated into large navy blue loose-leaf folios, of which more than one thousand volumes eloquently testify to the importance attached to this branch of the Museum's educational work. Pleas for the contribution of pictures were frequent in the early days of the Museum Library. "Photographs of art objects, of architecture and decorations, cuttings from art journals, from magazines, or even catalogues are desired — whatever bears upon or illustrates the progress or history of industrial art is of value, and will aid the American workman and manufacturer to elevate the character of their products."

The organization of the Scrapbook Collection followed its Parisian model, the Library of the Union Centrale des Arts Décoratifs, only with regard to its scope. It was based on two primary divisions; the decorations of buildings, and the decoration of man and the objects he uses. Whereas in Paris the subject arrangement was classified throughout, a more elementary alphabetical arrangement of the main subjects, with topical, chronological and geographical subheads was chosen here. The desire to incorporate pictures into this giant historical and topical scheme embraced everything. Books were made and unmade to fit the system, to illustrate the scheme. In her paper, *The Making of a Modern Museum* (1919), Miss Eleanor Hewitt tells of a librarian from Boston, who, upon visiting the Scrapbook Library, "seemed overcome by its practical instructive value, and at the fact that both rare and expensive books had been taken apart and remade in a new order to render them more available for study."

It might be observed that only incomplete duplicates were cut up for the Scrapbook Collection. At the same time many rare and old engraved books — not taken apart and not clipped — had become part of the Reference Library and were available for consultation in their original form.

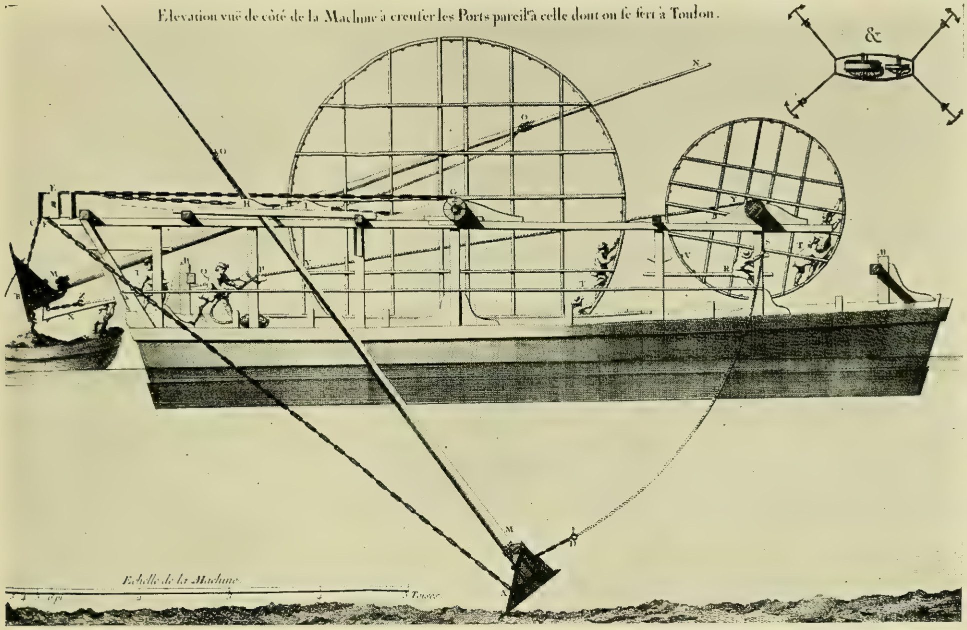
The Scrapbook Collection gradually fanned out from its initial concept of a decorative arts collection in the strict sense of the term. There was a demand for other pictorial materials, especially reproductions of paintings, drawings, engravings, and the natural forms. In the 'thirties the classification scheme was revised and expanded on the basis of the "N," or "Fine Arts," classification of the Library of Congress, to include all the arts. Furthermore, the chronological subdivision under each topic, followed by a geographical subhead, was abandoned in favor of an arrangement first by country and then by period. For example, the Tiepolo ceilings of the Würzburg Residenz may be found under Architectural Details — Ceilings — Germany — Eighteenth Century. Folders containing unmounted pictures were added on all subjects, and files established of related materials, such as "Countries and Peoples," "Transportation," "Sports and Games." In 1948-49 two large groups of pictures came to the Library: Mr. and Mrs. G. Glen Gould gave some 45,000 original photographs of objects sold at auctions, and Mrs. George A. Kubler presented her husband's collection of over 6,000 classified folders of engravings, much of it of Americana, clipped primarily from nineteenth-century sources. The "Encyclopedic Scrapbook


Prospect af Kongens Torv, taget fra et andet Sted.
Vue du Marché du Roi d'un autre Endroit.
TAB XLIII

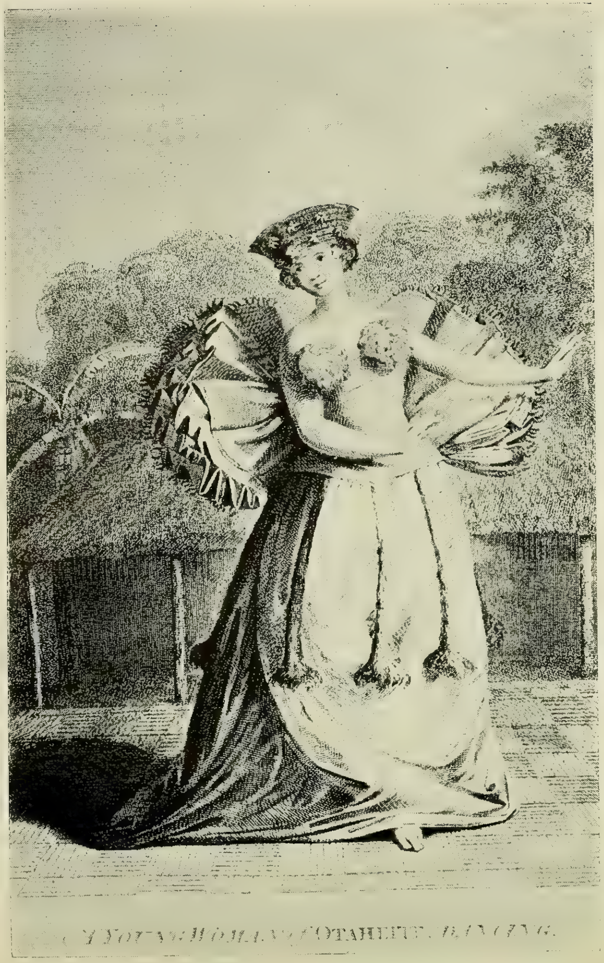
Laurids Lauridsen de Thurah (1706-1759). *Den Danske Vitruvius.* Copenhagen, 1746-1749. – Prospect af Kongens Torv.

Collection" had thus developed into a comprehensive Picture Collection comprising over 600,000 classified pictures and photographs.

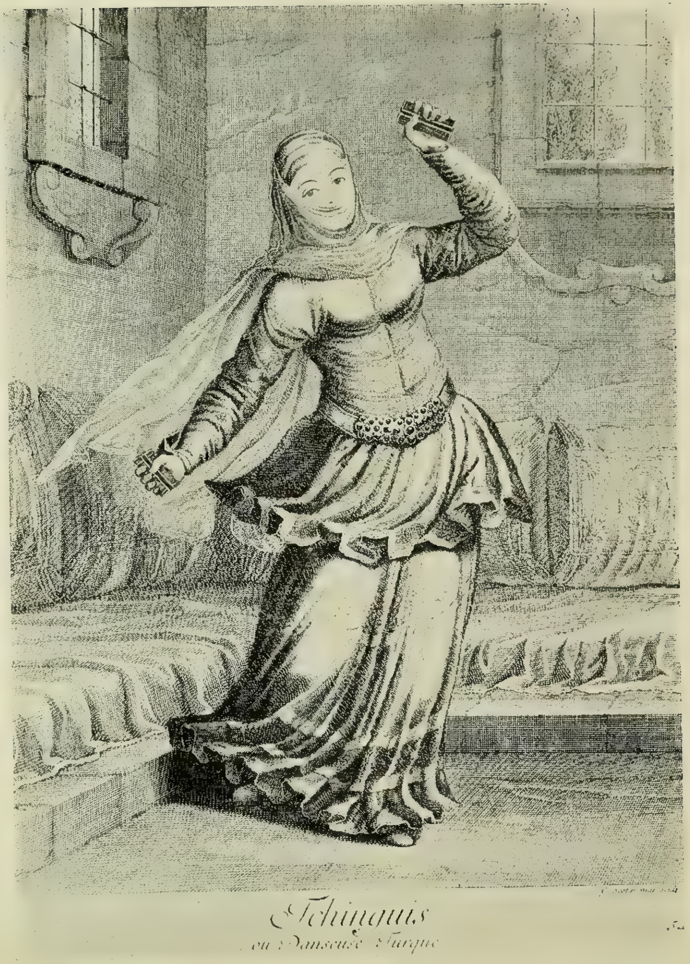
Books were first mentioned in the Museum's annual report of 1899. Compared with the rapidly growing Scrapbook Collection they were obviously only of secondary importance. Their purpose was to "reinforce" the scrapbooks. There was no book fund; gifts constituted the only source of acquisitions. The Misses Hewitt themselves were the most generous donors of books to the young Library. Among the Library's first books were Owen Jones's *Grammar of Ornament,* Piranesi's *Diverse Maniere d'Adornare i Cammini* (1769) and Audsley and Bowes's *Keramic Art of Japan.* They were followed by the folios of reproductions of prints and drawings from the British Museum, the five volumes of the Spitzer Collection catalogue and others. These titles illustrate fairly well the direction the Museum Library was to take, to which it has remained faithful to this day: to collect books on the decorative and graphic arts, and to include also original engraved books. The textile arts, now the strongest field in the Library, as well as


Elevation vuë de côté de la Machine à creuſer les Ports pareille à celle dont on ſe ſert à Toulon.
&
Echelle de la Machine
Toises

Bernard Forest de Belidor (1693-1761). *Architecture Hydraulique.* Paris, Jombert, 1737-1753.— Deuxieme partie, tome second, pl. XX, p. 208: Elevation vuë de côte de la Machine à creuser les Ports . . . Given by Henry Oothout Milliken.


A Young Woman of Otaheite, Dancing.

James Cook (1728-1779). *A voyage to the Pacific Ocean . . . under . . . Captains Cook, Clerke and Gore* . . . London, W. and A. Strahan, 1784. – Atlas, pl. 29: A Young Woman of Otaheite, Dancing. Bequest of Robert Winthrop Chanler.


Tchinguis
ou Danseuse Turque
54

Le Hay. *Recueil de cent estampes representant differentes Nations du Levant* . . . Paris, 1714. – Pl. 54: Tschinguis ou Danseuse Turque. Given by the Misses Hewitt.

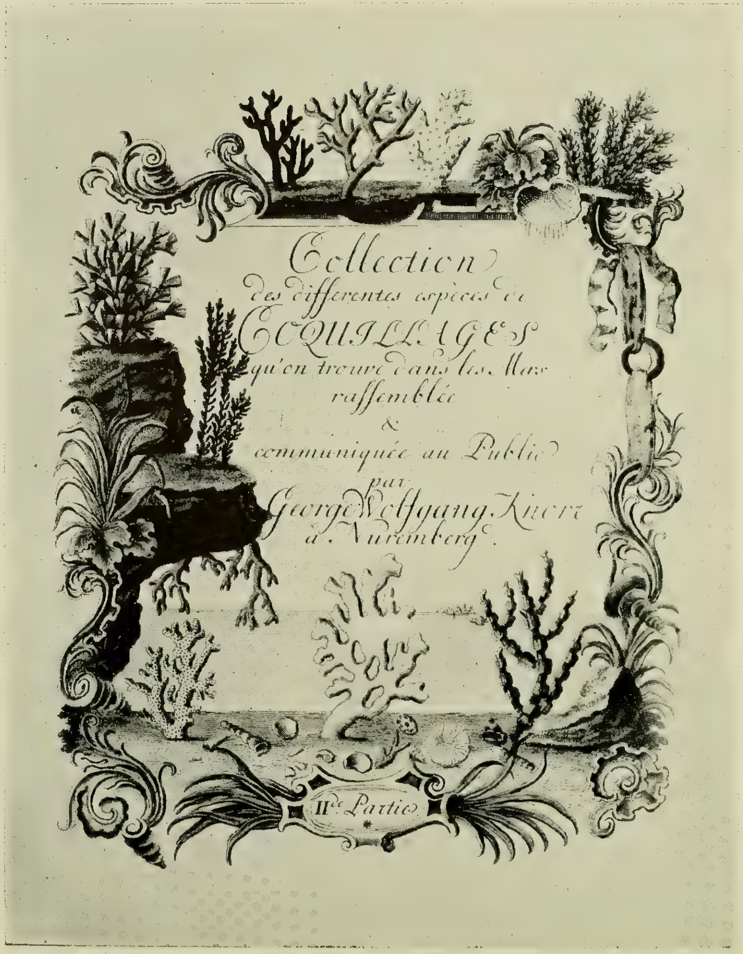
furniture and architecture, were apparently not represented in the earliest stages of the book collection.

After four years of active functioning, in 1901, the number of books in the Library was 250 and the number of scrapbooks 450. The following year, however, The Mary Stuart Book Fund was assigned by the Trustees of the Cooper Union to the Museum Library; this made it possible to build up the book collection more systematically. Among the earliest purchases were such standard works as Adeline's *Art Dictionary* and Bryan's *Dictionary of Painters and Engravers.* Other purchases included Symonds's *Renaissance in Italy,* Strange's furniture handbooks, and the writings of Lady Dilke and Paul Lacroix. All the South Kensington Museum handbooks were ordered from London; they were not to be kept in the Library, however, but placed on tables throughout the galleries as introductory reading matter on such subjects as glass, ceramics, enamels, embroidery, lace, etc. The next summer's purchase was again very typical of the Misses Hewitt. Monographs on all the greater art cities were added, in order to give the American craftsman an idea of the surroundings of his European confrère, whose designs were to be his models. Purchased the same year were Molinier's books on the history of French furniture and Robert Wood's two monumental works on the Ruins of Baalbek (1757) and Palmyra (1753).

The works of the great French architects, designers and *ébénistes* of the eighteenth century were the most desirable objects of study. The eighteenth century was, indeed, the century of "good design," so that the useful, and expendable, Guérinet facsimile reprints of the eighteenth century designers were quickly acquired, even before the present extensive holdings of original material of this period had been developed.

Notable gifts had come to the Library in its earlier years. The earliest of the many magnificent color-plate books in this Library was Curtis's *Flora Londinensis* (1777) given by Miss Elisabeth Marbury in 1901. From Mrs. James W. Roosevelt in 1910 came the extremely rare nine volumes of Kingsborough's *Antiquities of Mexico* (1831-48). The ten volumes of Buffon's *Histoire Naturelle des Oiseaux* (1770-86) was presented by Mrs. Charles T. Matthews in 1922. But it was three members of the Hewitt family who left an indelible mark on the Museum Library by bequeathing their book collections to it. The death of Mrs. Abram S. Hewitt brought several hundred volumes to the Library, among them many eighteenth-century works on architecture and landscape gardening. Through her bequest the book collection rose to 1,200 volumes in 1913.

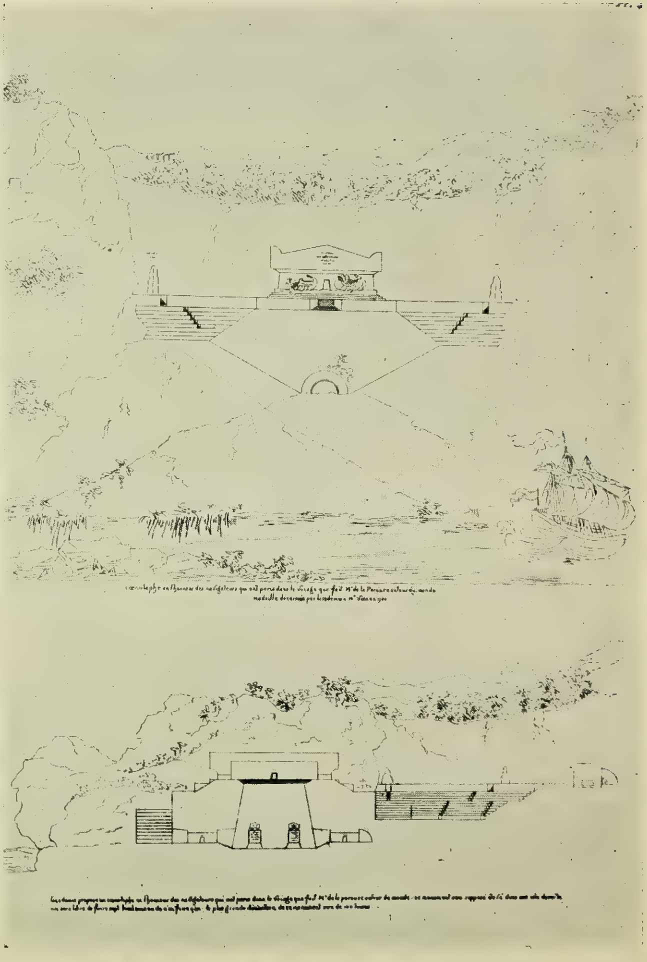
With the death of Sarah Cooper Hewitt in 1930 all books owned by her and her sister Eleanor (who had died in 1924) came to the Library, the greatest single influx of books in its history. To house her collection, her



Collection
des differentes espèces de
COQUILLAGES
qu'on trouve dans les Mers
raſſemblée
&
communiquée au Public
par
George Wolfgang Knorr
à Nuremberg.

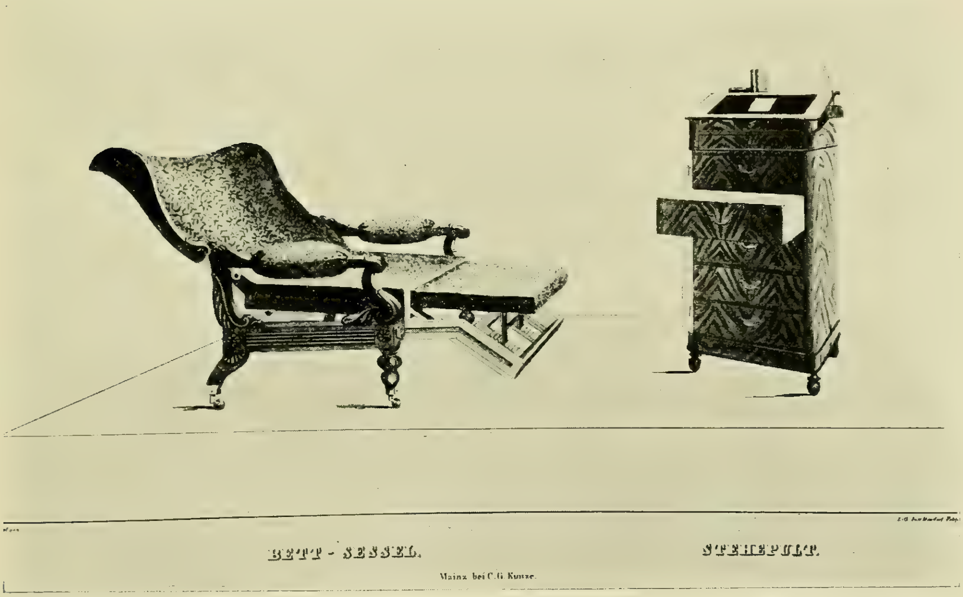
IIe Partie

Georg Wolfgang Knorr (1705-1761). *Les Délices des Yeux et de l'Esprit, ou, Collection Générale des differentes Espèces de Coquillages que la Mer renferme* . . . Germany, Nuremberg, 1760-1773. – II. Partie, Title-page. Purchased, Mary Stuart Book Fund.



Académie d'Architecture, Paris. *Collection des Prix* . . . Paris, 1795. – Tome I, 11e Cahier, pl. 4: Coenotaphe en l'honneur des navigateurs qui ont peris dans le voiage que fait Mr de la perouse autour du monde . . . Given by Mrs. Abram S. Hewitt.

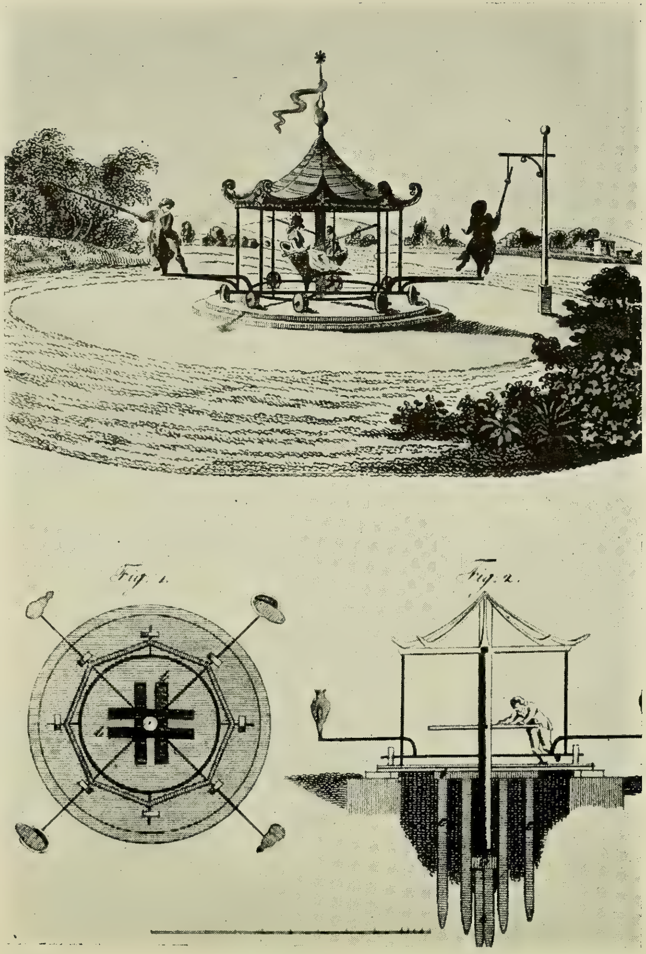
brother Erskine Hewitt gave the Sarah Cooper Hewitt Memorial Library, the room adjacent to the Reference Room. The eighteenth-century design of this room, which was brought to the Museum from the Hewitt house at


BETT - SESSEL.
STEHEPULT.
Mainz bei C.G. Kunze.

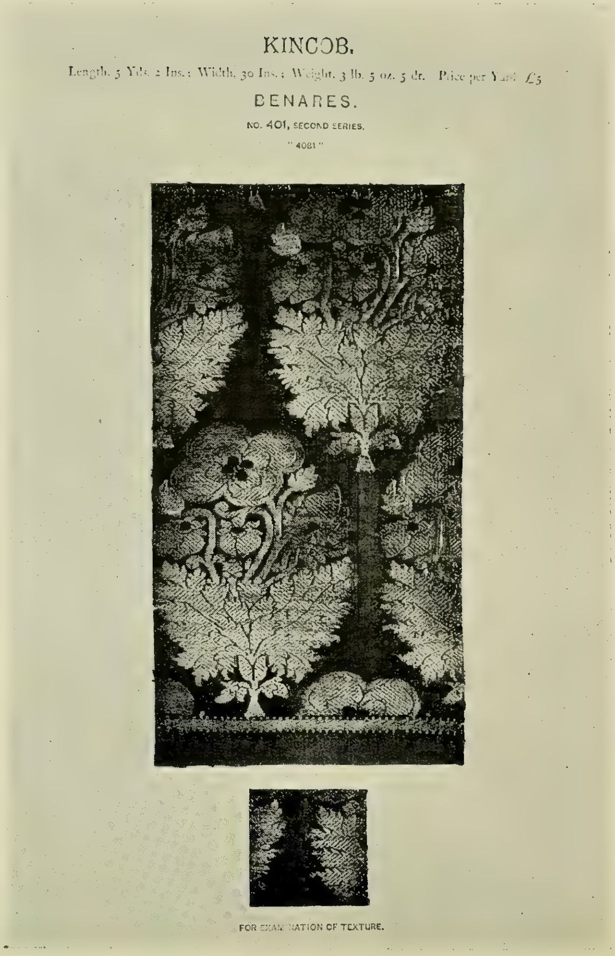
Journal für Möbelschreiner und Tapezirer. Mainz, Kunze, 1837. — Bl. 13: Bett-Sessel. Stehepult. Purchased, Mary Stuart Book Fund.

9 Lexington Avenue, is a copy of the *Salle de France* in the former *Ministère des Affaires Étrangères et de la Marine* at Versailles. The Memorial Library, dedicated in 1932, became the appropriate setting not only for the Sarah Cooper Hewitt Bequest, but eventually for all the Library's rare book treasures. Its movable circular staircase, executed from an eighteenth-century design, provides a decorative and unusual, but practical enough means of reaching the upper book shelves, causing comment and admiration from Museum visitors of all ages.

The third large bequest was that of Erskine Hewitt, five hundred of whose books were added to the Library in 1938-39. He had, many years before, given one of the most famous and most spectacular books ever published: the four original double-elephant folio volumes of Audubon's *Birds of America* (1827-30).



Ideenmagazin für Liebhaber von Gärten, Englischen Anlagen, und für Besitzer von Landgütern. Leipzig, Baumgärtner, 1796-1811. – Heft 21, pl. 1: Escarpolette . . . de style chinois, inventé par M. Dähne, méchaniste. Given by the Misses Hewitt.


KINCOB.

Length, 5 Yds. 2 Ins.; Width, 30 Ins.; Weight, 3 lb. 5 oz. 5 dr. Price per Yard £5

BENARES.

NO. 401, SECOND SERIES.

"4081"

FOR EXAMINATION OF TEXTURE.

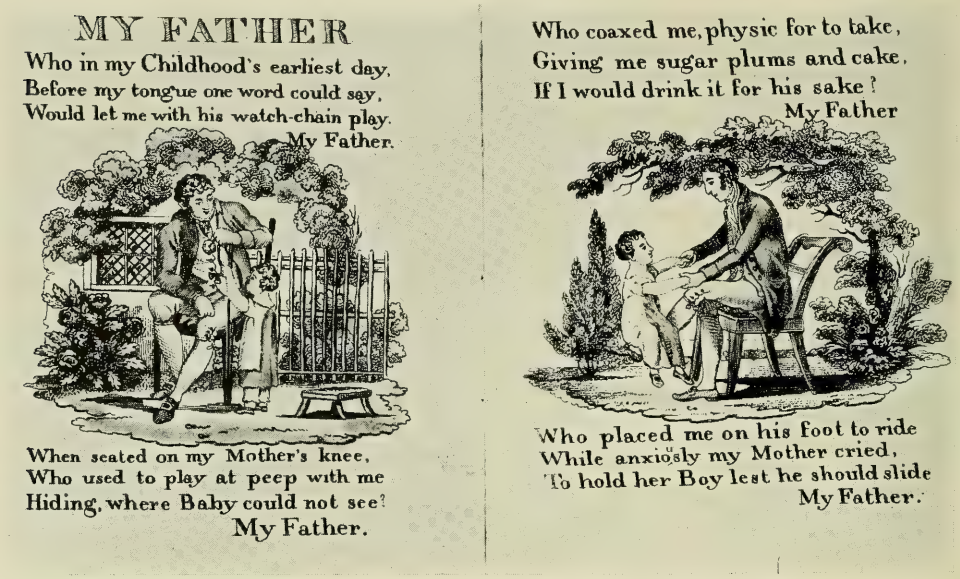
J. Forbes Watson. *Collection of Specimens of the Textile Manufactures of India* (Second Series). London, India Museum, 1872-1877. – No. 401, Kincob, from Benares. Purchased, Mary Stuart Book Fund.

There were other outstanding bequests which added precious volumes to the Library, especially that of Robert W. Chanler, the well-known decorative painter, who derived such inspiration from the Museum's collections that in 1930 he willed his choicest books on the decorative arts and natural history to the Library. Prominent in this group were Mark Catesby's *Natural History of Carolina, Florida and the Bahama Islands* (1771), Maria Sybilla Merian's *Surinaamsche Insecten* (1730), and Lavaillant's *Histoire Naturelle des Oiseaux de Paradis* (1806).

Several of the most sought-after color-plate books had been purchased out of the Mary Stuart Book Fund, among them Thornton's *Temple of Flora* (1799-1807) and Edwards' *Natural History of Birds* (1743-64).

Although the original concept of a "library of good design" has always been kept alive, other aspects of book collecting have been included in the Library's program. Selectivity is of utmost importance in a library which operates on an extremely small book budget and where space is at a premium. Since space presently available restricts the Library to about 12,000 books and periodicals and 7,000 art auction catalogues, the needs of the public, the necessity to aid the research of the museum workers, and the desire to keep the decorative arts collection well-rounded by acquisition of material relating to contemporary design have to be carefully weighed against each other in book selection. Another more general objective is to render the Library more useful by developing its unique collections and resources. The combination of all of these factors has made the Library's book collection on textile arts a very complete one. It includes not only some of the sixteenth- and seventeenth-century pattern books, but also a number of volumes containing actual swatches, the most important of which is J. F. Watson's second series of *Collection of Specimens of the Textile Manufactures of India* (1872-77). In the fields of furniture, costume, ornament, and ceramics the Library contains the great standard works, but is not quite as complete as in works on textiles. The subject of prints and drawings is now requiring the purchase of new material, although, for some years, the Library has been so fortunate as to own some of the greatest sets of facsimile reproductions of drawings such as those in the Uffizi Gallery. The number of early architectural books is remarkable for a library of this size, and the same is true of the early natural history works. The Decloux collection of ornamental engraving is hardly matched in this country.

Along with these the Museum Library has developed certain specialties and side lines in fields not always directly connected with the decorative arts. Exhibitions, festivals, stage designs and calligraphy are some of the subjects represented in this group. There is also a collection of illustrated children's books, mostly from the nineteenth and early twentieth centuries, including some of the best known illustrators, such as Kate Greenaway, Walter Crane and Arthur Rackham from England, and Job, Dulac, Caran d'Ache and Boutet de Monvel from France. The Library has established



MY FATHER

Who in my Childhood's earliest day,
Before my tongue one word could say,
Would let me with his watch-chain play.
My Father.

When seated on my Mother's knee,
Who used to play at peep with me
Hiding, where Baby could not see?
My Father.

Who coaxed me, physic for to take,
Giving me sugar plums and cake,
If I would drink it for his sake?
My Father

Who placed me on his foot to ride
While anxiously my Mother cried,
To hold her Boy lest he should slide
My Father.

My Father. A Poem. Philadelphia, 1818. Given by Miss Elisa Akerly Richardson.

something of a reputation for having out-of-the-way or hard-to-find materials. Reference questions on birdcages, fireworks, or snuff boxes occur quite frequently. But if a reader were to ask for information on the dyeing of ostrich feathers, on cake decoration, or on secret chambers and hiding places, books could also be found at a moment's notice.

And who are the people who seek information on the multitude of subjects from furniture and textile design to wine labels and old sheet music covers?

There are, of course, first and above all, the professional Library users, the designers. Here is the amateur designer who wants to decorate metal trays with native American folk motifs. There is the interior designer who is looking for French Empire color schemes. Stage designers, costume designers, advertising artists and especially textile designers constantly draw on the Library's resources for their ideas. Its materials are adapted and transformed into workable designs that can be sold and manufactured.

Indeed, the most amazing transformations take place in the course of this process. Job's illustrations of a children's book become stage costumes for a college drama department; the Pantheon in Rome makes a backdrop for a department store's advertisement of marble top tables; an old New England well-head turns into a design for a letter head. Lace patterns become printed cottons; calligraphic scrolls, design motifs on mass-produced porcelain plates; a directoire urn, a fancy perfume bottle.

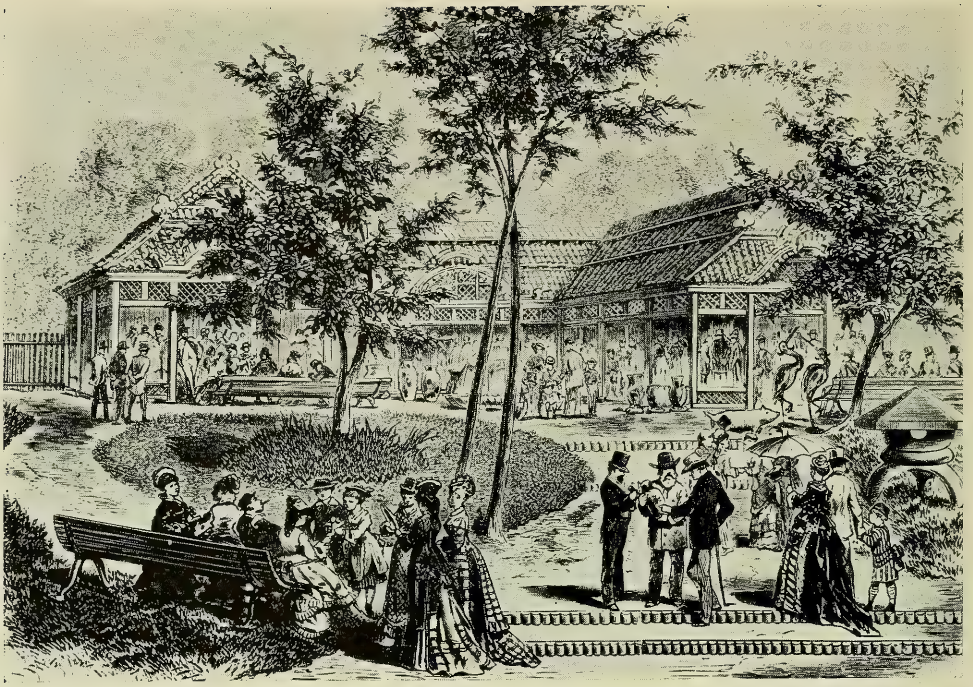
Another group of Library clients is composed of writers and authors. They usually appear after they have visited many other places and, much to their surprise, they find at Cooper Union what could not be unearthed elsewhere. An architectural historian may be in search of examples of oriental influence in *art nouveau*. Another may be looking for illustrations of early bathtubs, and still another is writing an article on draperies and lambrequins for a women's magazine. In the same class are the telephone requests of editors and publishers checking on the accuracy of some of their authors' statements.

A manufacturer who wants to put brass beds on the market, is looking for early designs of such beds. A textile manufacturer might be interested in designs of *savonnerie* that could be produced on his machines.

The design trends well illustrate the changing taste of the times. Over the years the chief interest in the field of furniture design has shifted from the Italian Renaissance to the eighteenth century and more recently to the English Regency and the Victorian era. Although all kinds of European folk designs are in constant demand, growing nationalism has been reflected in an increasing preference for the earlier American decorative patterns.

Art collectors and art dealers, also, make use of the Library. One may want to identify the maker of an old clock and another to establish the origin of a piece of rococo jewelry. A hobbyist who collects buttons may desire information on vegetable ivory. There may be a clubwoman giving a talk on the history of lighting, who wants to gather material for her lecture.

The most active and largest contingent of Library visitors, however, are students. It is first mentioned in the Annual Report of 1905 that four schools regularly used the Museum for study. During the past fifty years students, individually and in classes, have steadily come to the Library in search of materials. Classroom assignments and individual projects have included copies and sketches of the Greek orders as well as Gothic tracery; of Sheraton chairs as well as Adam mantelpieces; of Louis XIV trophies as well as Louis XV mouldings. Egyptian lotus ornaments, Greek meanders, French toiles, English chintzes, American Pilgrim clothes or eighteenth-century court costumes are among the innumerable objects and designs that have commanded the students' attention. Term papers on the origin



Illustrirte Zeitschrift, Leipzig. — Illustration: Von der Weltausstellung in Philadelphia 1876: Der Japanesische Bazar. Given by Mrs. George A. Kubler.

of the brocades in the paintings of Van Eyck, or the development of the hardware designs used on English furniture, have involved rather advanced research on the part of certain students.

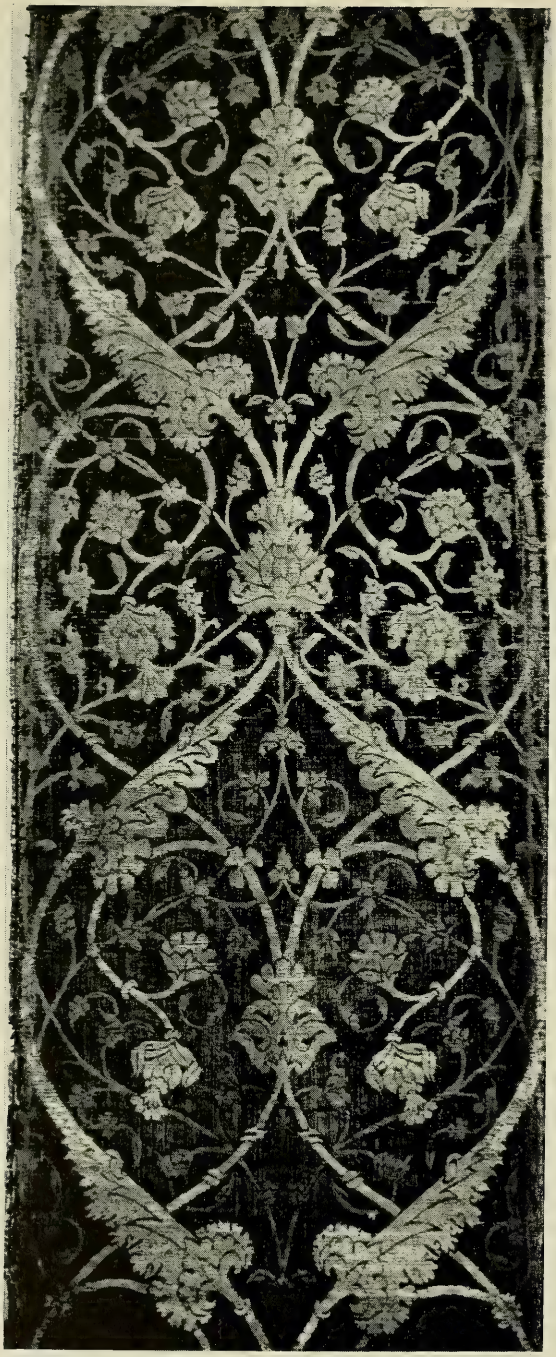
Library use by the Cooper Union students, on the other hand, has been along different lines. Although all reference materials are used whenever the occasion arises, it is the rare book collection that is the primary object of their study. The craftsmanship of a handmade book, the artistic quality of the illustrations and the graphic processes have a considerable attraction for the students and stimulate their own efforts. The great eighteenth-century color-plate books on natural history offer unlimited possibilities for applications and solutions of two-dimensional design problems. The *Nuremberg Chronicle* (1493) and other examples of early printing are frequently consulted in connection with classes on book design and typography. In the History of Architecture course the development of the architectural styles is discussed by demonstrating the Library's early editions of the works of Alberti, Palladio, Inigo Jones, Gibbs, Blondel, Mariette and others, down to the classicism of nineteenth-century American architects such as Asher Benjamin and Minard Lafever.

The Cooper Union engineering students, too, benefit from the riches of the Museum Library. In the course of their Civilization classes book seminars are held in the Memorial Library, and original source books are examined illustrating the arts and sciences of the Renaissance, the Baroque and Rococo, or the Nineteenth Century, as the occasion requires. Here again, the historic flavor of a rare old book has a special appeal to the students, and the workmanship and quality of these fine books usually elicit their admiration. Phonograph records of contemporary music add another dimension to the period discussed. The combination of tangible, visual and audible elements brings to life periods of history that are rather remote from the young engineering student of today. It gives the student an awareness of his cultural heritage and puts him in communication with the spiritual content of other eras.

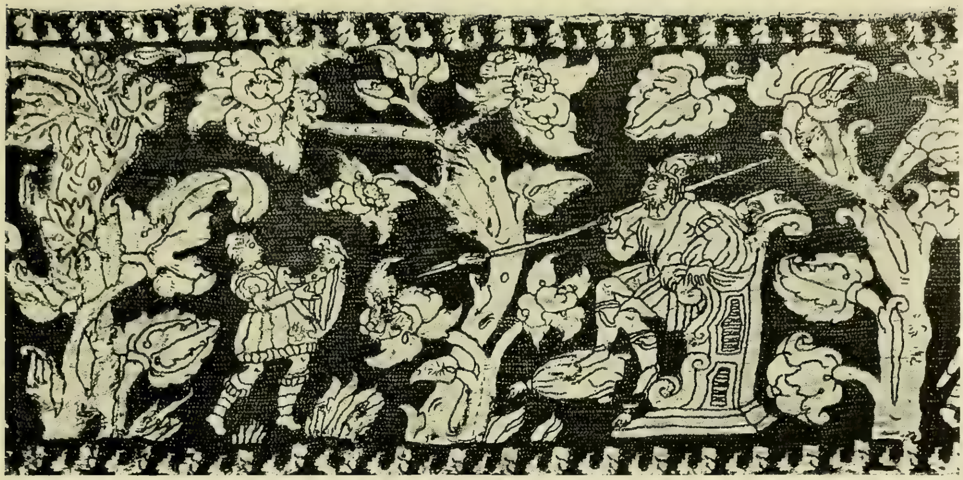
Accessibility and a minimum of restrictions have guided the Library's services ever since it opened its doors. The physical compactness of the Library, which has no stack space, has rendered these services personal and informal. Everything is there "for use," as Miss Eleanor Hewitt put it. Present day Library policy has remained true to this philosophy. No books are kept behind glass doors or in locked cases, available only to the selected few with proper introductions or elegant appearance. All books, even the rarest, may be consulted for reference by any one who wishes to see them. Study and use of materials not easily available elsewhere are permitted and even encouraged.

The place of the Museum Library within The Cooper Union and the larger community is determined by its collections, but in no lesser degree by its philosophy of service. By providing research materials to the Museum staff and to faculty members and students of both Schools, the Library has aided with individual study projects and thus contributed to the educational work of the institution. Through tours, classes, and seminars held in its quarters the Library has even more directly participated in the teaching program of The Cooper Union. The Library's services to the community are not so tangibly measured. In the nearly sixty years of its existence its collections have been a source of inspiration and a guide to professional accomplishment of many an artist, designer, or lover of the arts. By offering personal enrichment and enlightenment the Library has followed the old democratic principle so dear to Peter Cooper, that the highest development of the individual will ultimately benefit society itself.

GERD MUEHSAM



Panel of cut velvet on satin ground. Asia Minor, late 16th-early 17th century. Purchased, Au Panier Fleuri Fund. Height of repeat, 42″.

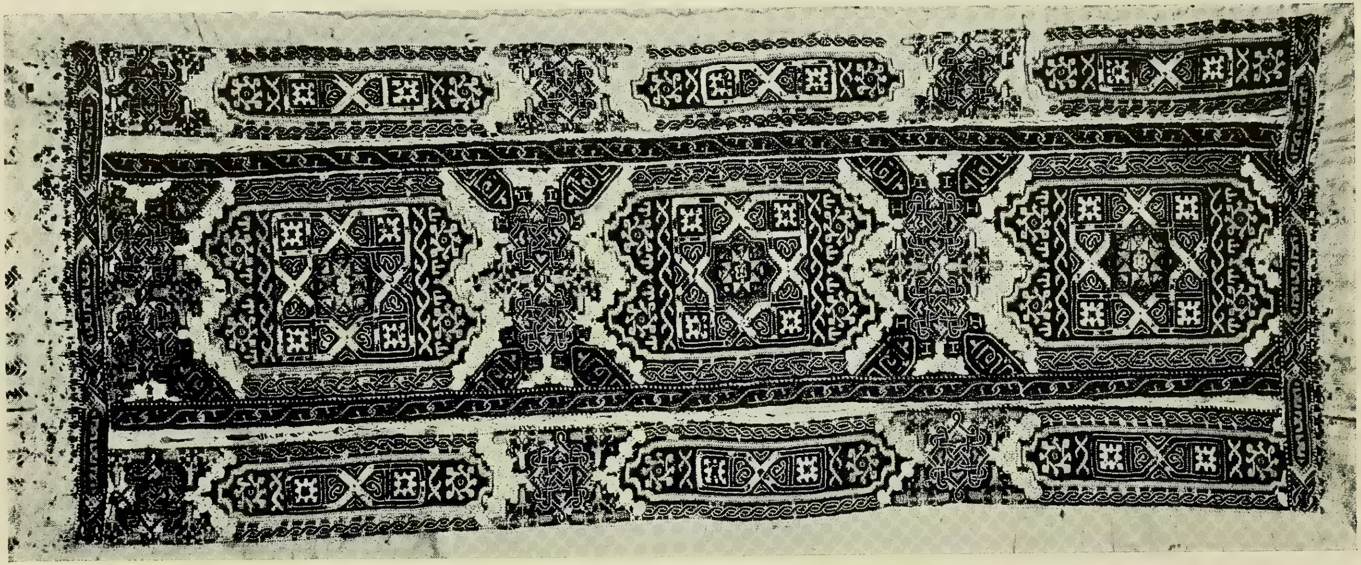


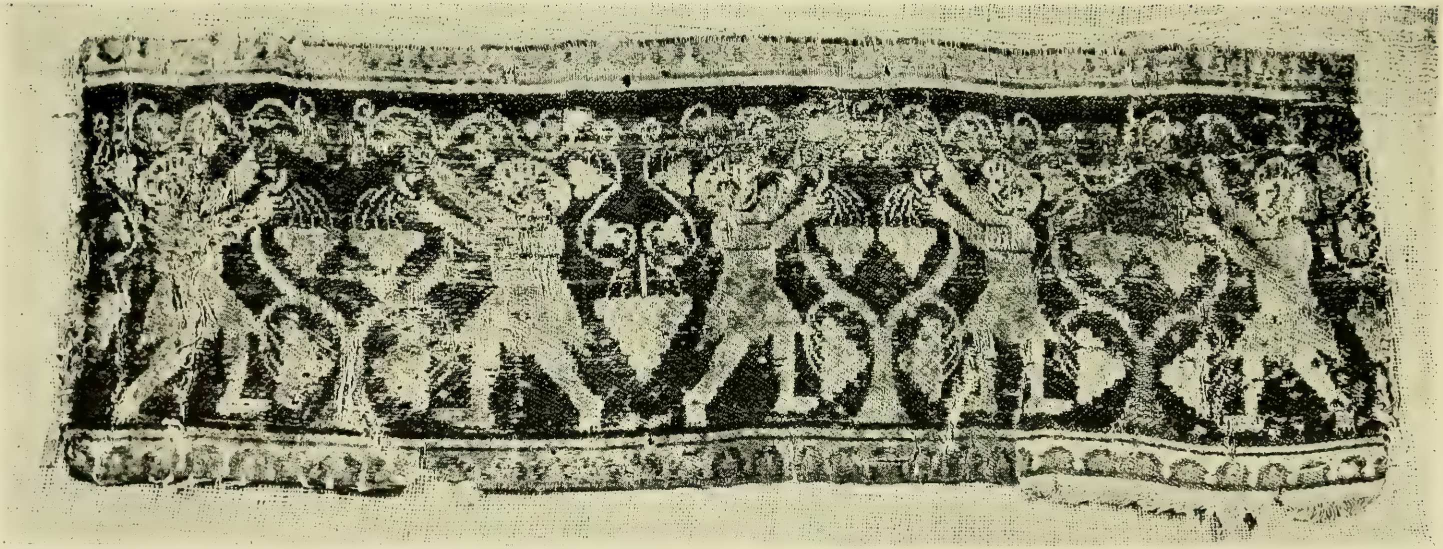
Detail of embroidered border showing David before Saul. Italy, late 16th-early 17th century. Given by Irwin Untermyer. Portion shown, 8″ x 15″; whole border, 8″ x 41″.

RECENT ADDITIONS TO THE MUSEUM COLLECTIONS

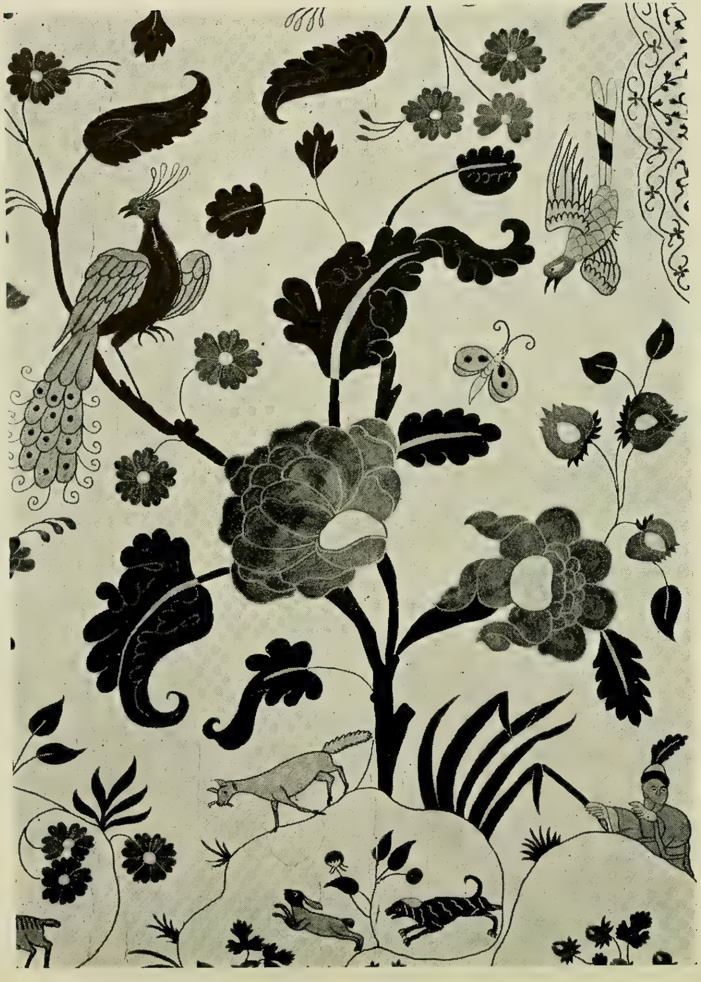
During the past four years the special exhibition gallery of the Museum has been so steadily occupied with loan or travelling exhibitions that there has been slight opportunity to put on view a selection of the objects that have continued to flow into the collections. A special showing was made, in the autumn of 1951, of the old master prints presented over the course of several years by Mr. Leo Wallerstein, and reference to this munificent gift, as well as to various individual objects acquired during this period, has been made in recent issues of the Chronicle.

In these pages is shown a small sampling of the additions that have recently been made to the Museum's collections. Although the available space permits only an inadequate representation, both of categories and of individual fine items, the objects here illustrated will serve as a reminder of the Museum's consistent development and enrichment, and as an acknowledgment of the Museum's gratitude to all the generous donors of these objects and of hundreds of others that can not be illustrated.

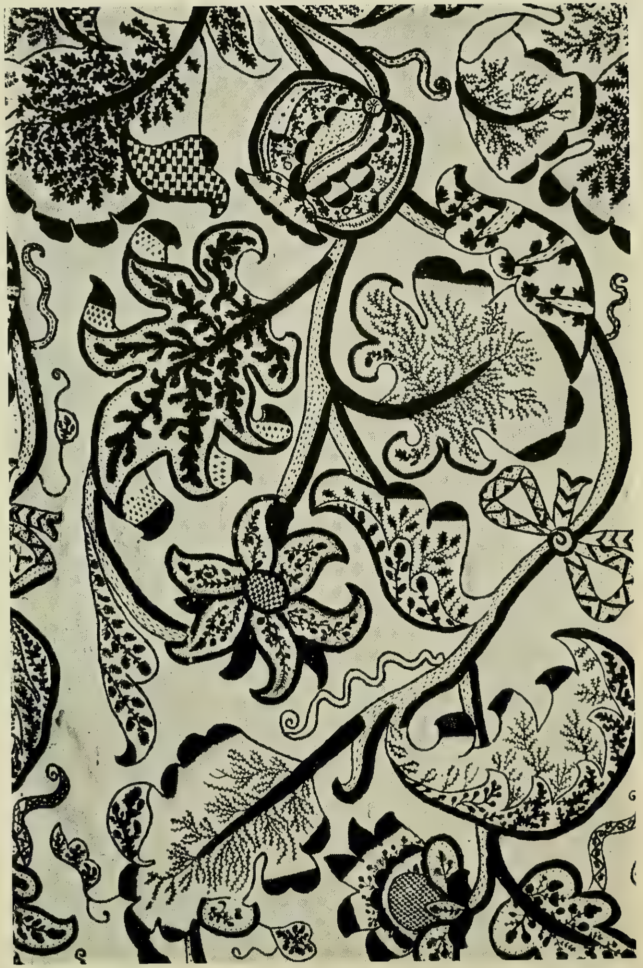

Silk embroidered border. Spain, Hispano-Moresque style, 15th-16th century. Purchased in memory of Elizabeth Haynes by her friends.



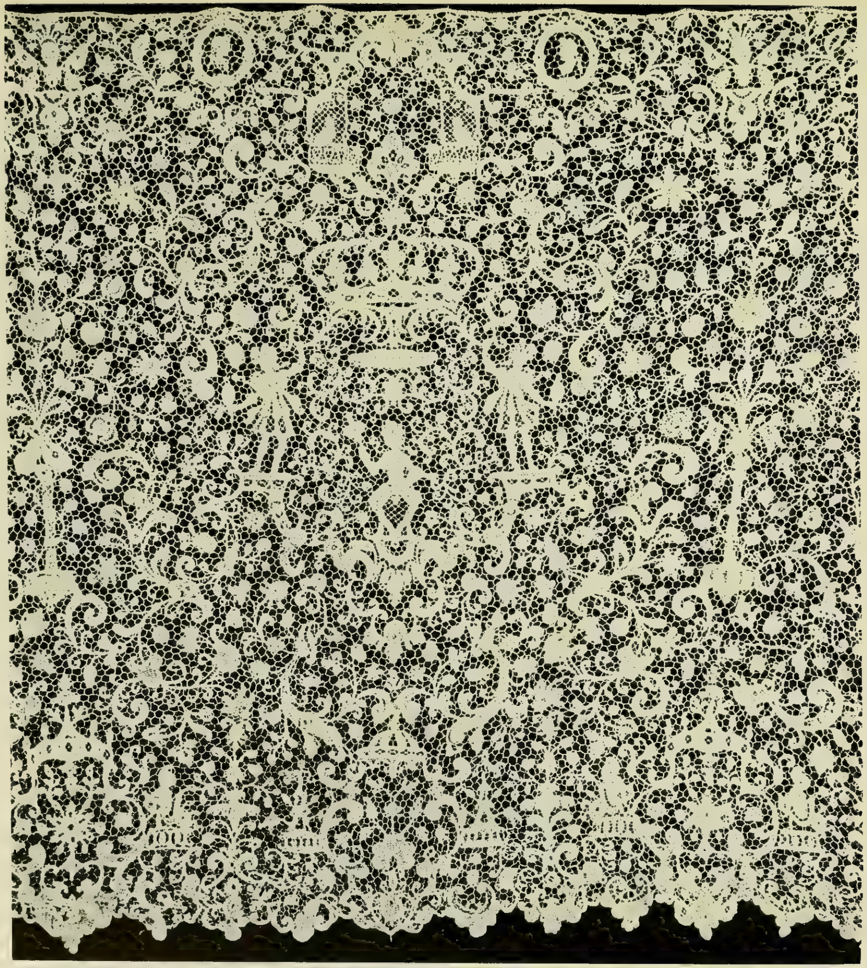
Silk twill depicting men gathering grapes. Propably Egypt, Antinoë, 5th century. Purchased, Au Panier Fleuri Fund. Length, 7⅞".



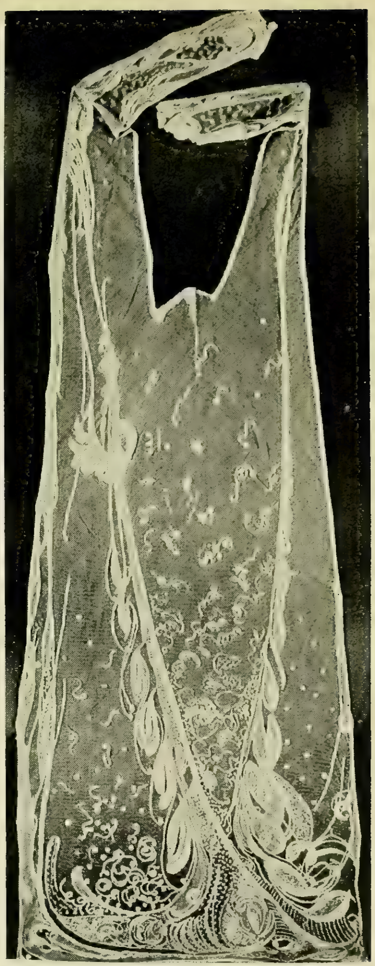
Detail of chainstitch-embroidered coverlet, from Ashburnham Place, Sussex. India, for European market, 17th century. Purchased, Au Panier Fleuri Fund. Portion shown, 32″ x 21″; entire coverlet, 114″ x 105″.



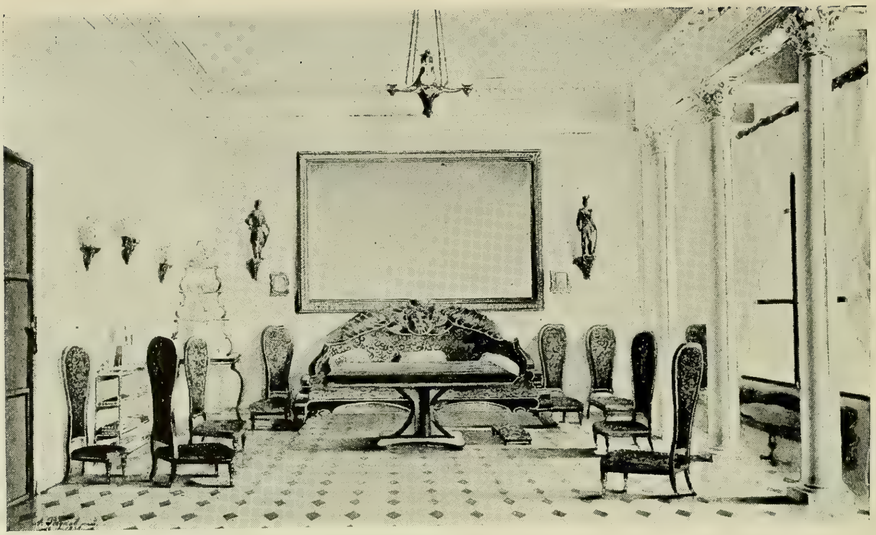
Detail of panel made up from embroidered bed-fittings. England, 17th century. Purchased, Au Panier Fleuri Fund, and gift of Mrs. Montgomery Hare. Portion shown, 57″ x 36″; entire panel, 73″ x 91″.



Section of lace flounce, Point de France. France, reign of Louis XIV, late 17th century. Given by Richard C. Greenleaf in memory of his mother, Adeline Emma Greenleaf. Depth of flounce about 24″.

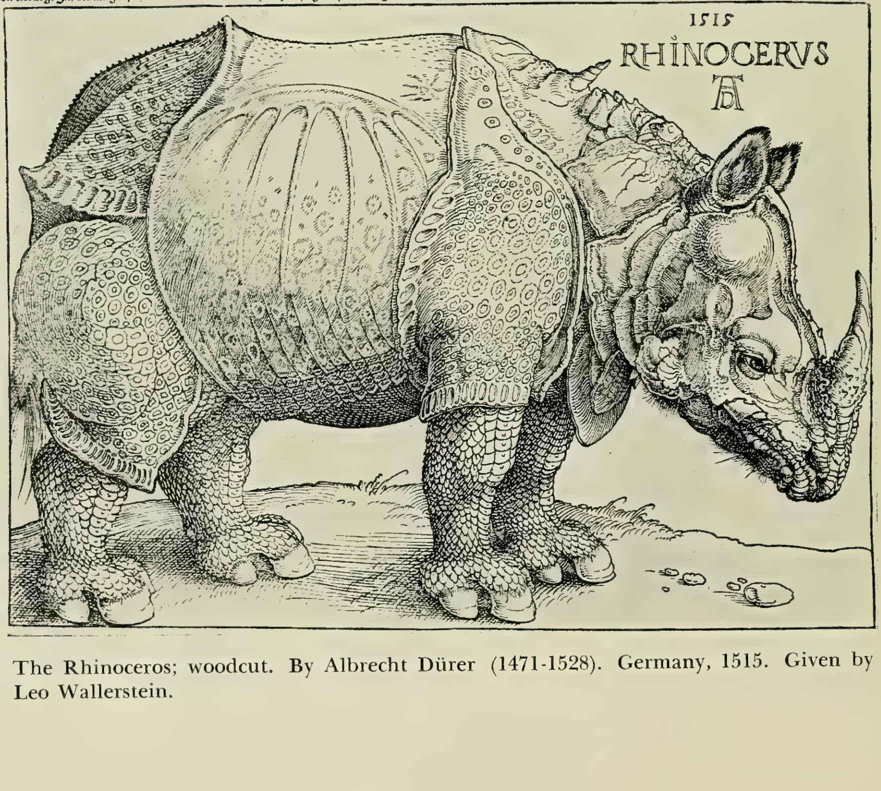


Embroidered panel. From wedding dress of the donor. Designed by Hector Guimard. Given by Mrs. Guimard. Length, 45½″; greatest width, 15½″.

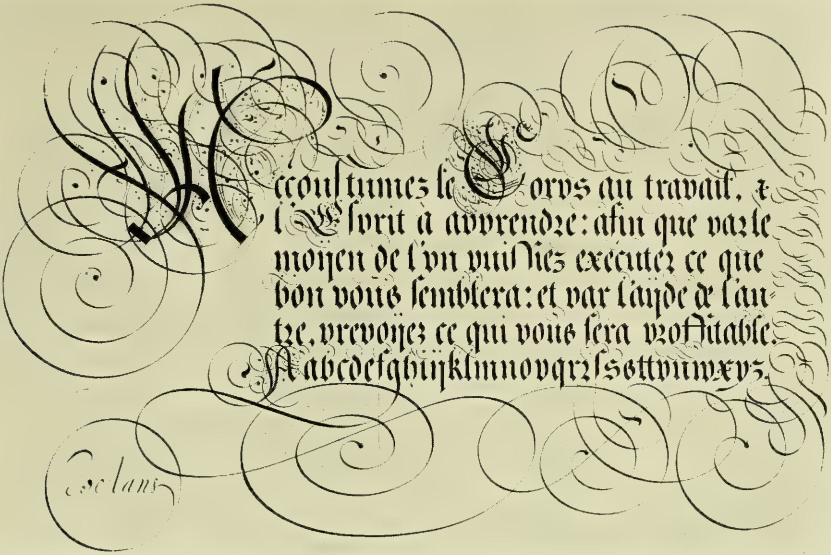


Salon interior; drawing. Signed and dated: A. Redkovsky, 1858. Russia. Given by Léon Grinberg.

Nach Chriſtus gepurt.1513. Jar. Adi.1. May. Hat man dem großmechtigen Kunig von Portugall Emanuell gen Lyſabona pracht auß India/ein ſollich lebendig Thier. Das nennen ſie Rhinocerus. Das iſt hye mit aller ſeiner geſtalt Abconderfet. Es hat ein farb wie ein geſpreckelte Schildtkrot. Vnd iſt vō dicken Schalen vberlegt faſt feſt. Vnd iſt in der groͤß als der Helfandt Aber nyderträchtiger von paynen/vnd faſt werhafftig. Es hat ein ſcharff ſtarck Horn vornen auff der naſen/Das begyndt es albeg zu weczen wo es bey ſtaynen iſt. Das doſig Thier iſt des Helffantz todt feyndt. Der Helffandt furcht es faſt vbel/dann wo es Jn ankumbt/ſo laufft Jm das Thier mit dem kopff zwiſchen dye fodern payn vnd reyſt den Helffandt vnden am pauch auff vñ erwürgt Jn/des mag er ſich nit erwern. Dann das Thier iſt alſo gewapent/das Jm der Helffandt nichts kan thůn. Sie ſagen auch das der Rhynocerus Schnell/Fraydig vnd Liſtig ſey.

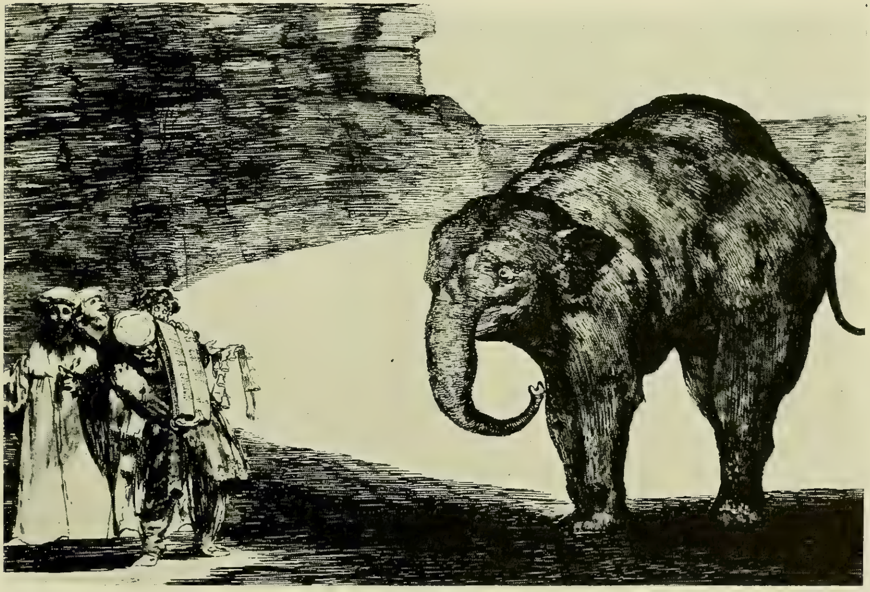


The Rhinoceros; woodcut. By Albrecht Dürer (1471-1528). Germany, 1515. Given by Leo Wallerstein.

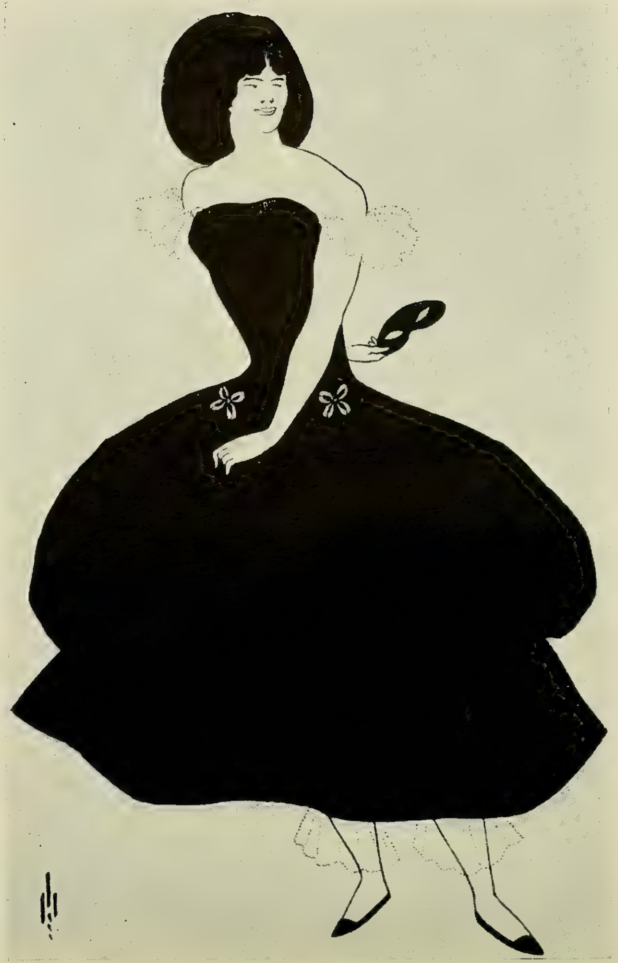


Accouſtumez le Corps au travail, & l'Eſprit a apprendre: afin que par le moyen de l'un puiſſiez executer ce que bon vous ſemblera: et par l'ayde de l'autre, prevoyez ce qui vous ſera proffitable.
Aabcdefghiijklmnopqrſsſttvuwxyz.

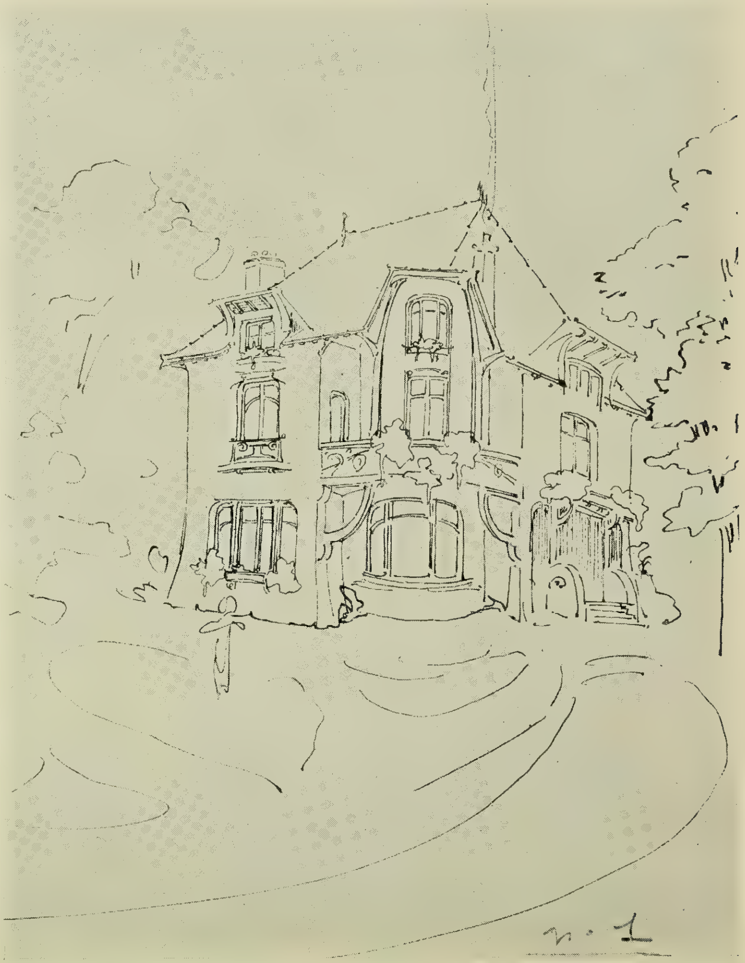
Page of a writing book; engraving. By F. Scheleman, after David Roelands. Netherlands, 1616. Given by W. J. Donald.



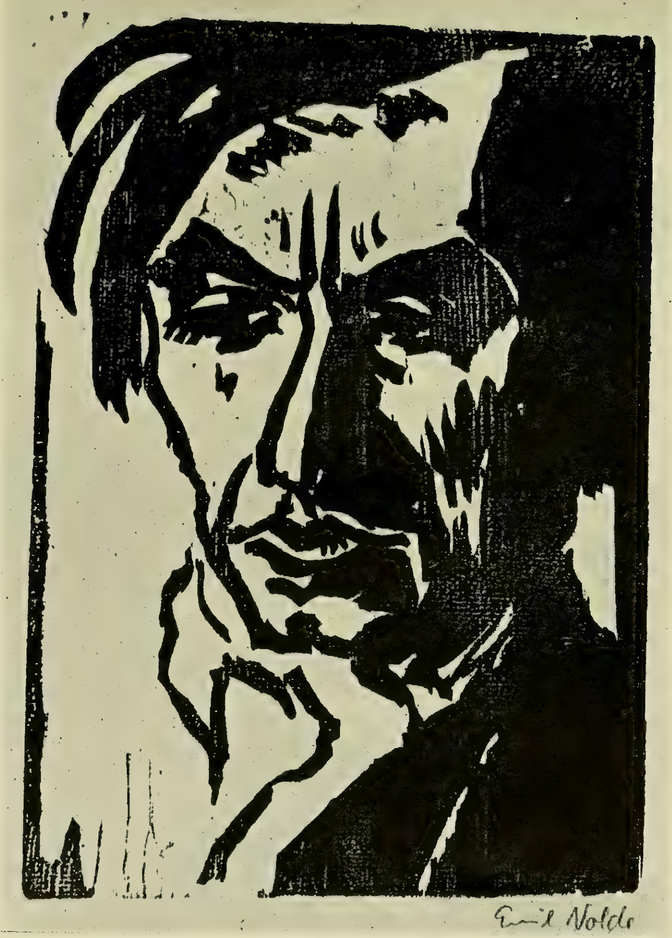
Other Laws for the People; aquatint. By Francisco José Goya y Lucientes (1746-1828). Spain, 1877 (executed 1800-1810). Given by Mrs. A. W. Erickson.



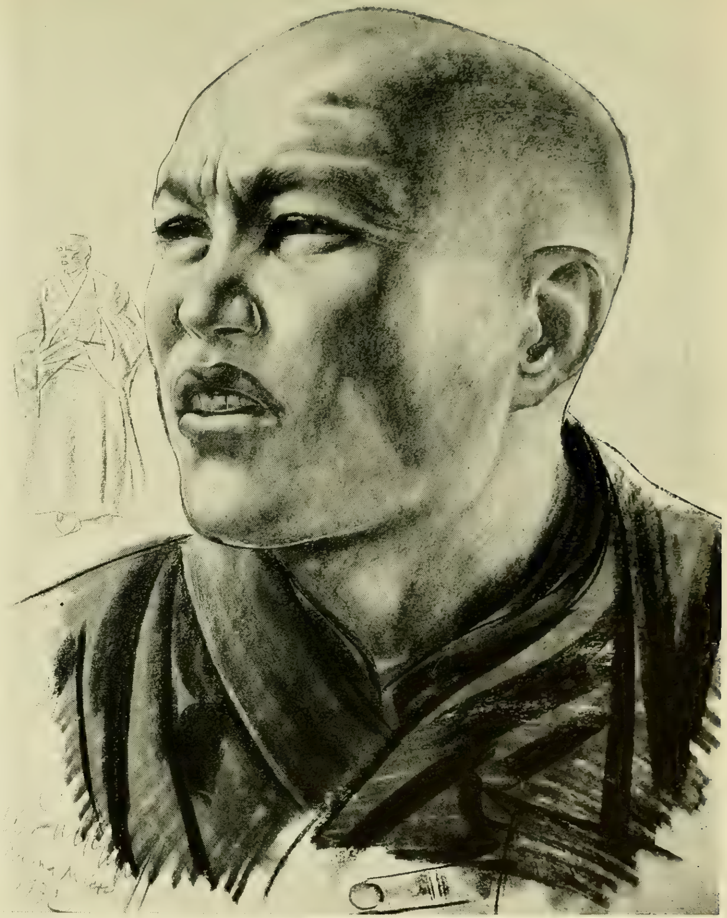
The Dancer with the Domino; drawing. By Aubrey Vincent Beardsley (1872-1898). From the Comedy Marionettes, No. 3. England, 1894. Given by Mrs. Stevenson Scott.



Design for a villa; drawing. By Hector Guimard (1867-1942). France, about 1900. Given by Mrs. Hector Guimard.



The Singer; woodcut. By Emil Nolde (1867-). Germany, 1911. Given by Mrs. Henry B. du Pont.



Lama; drawing. By Alexandre Jacovleff (1887-1938). Russian, working in Tibet, 1932. Given by Mr. and Mrs. Benjamin H. Javits.

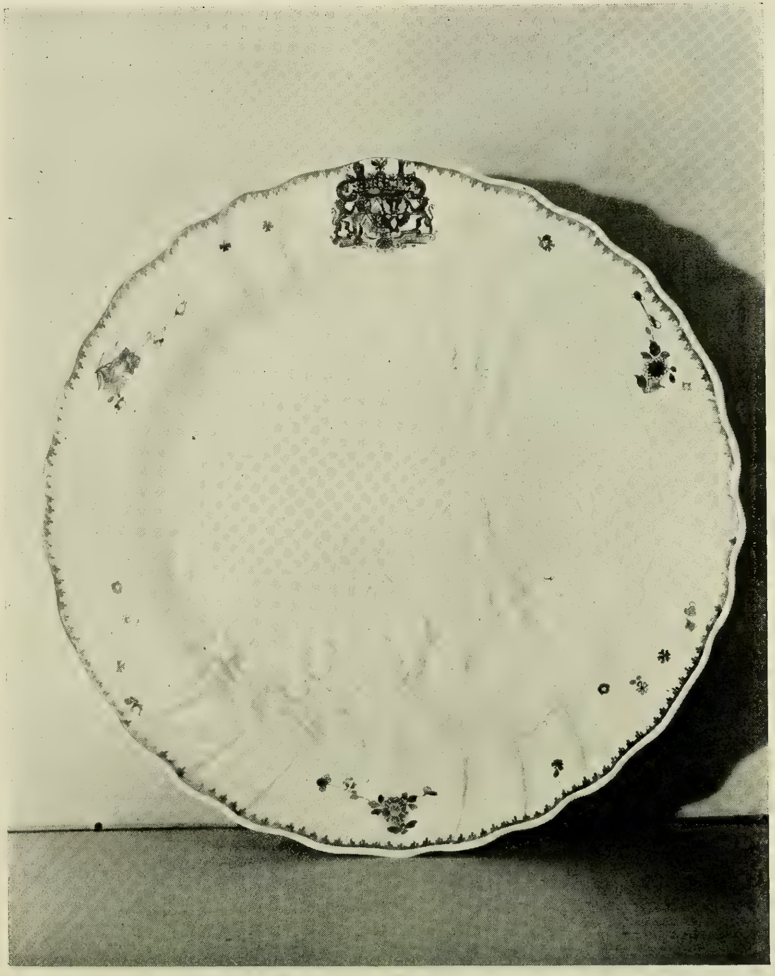
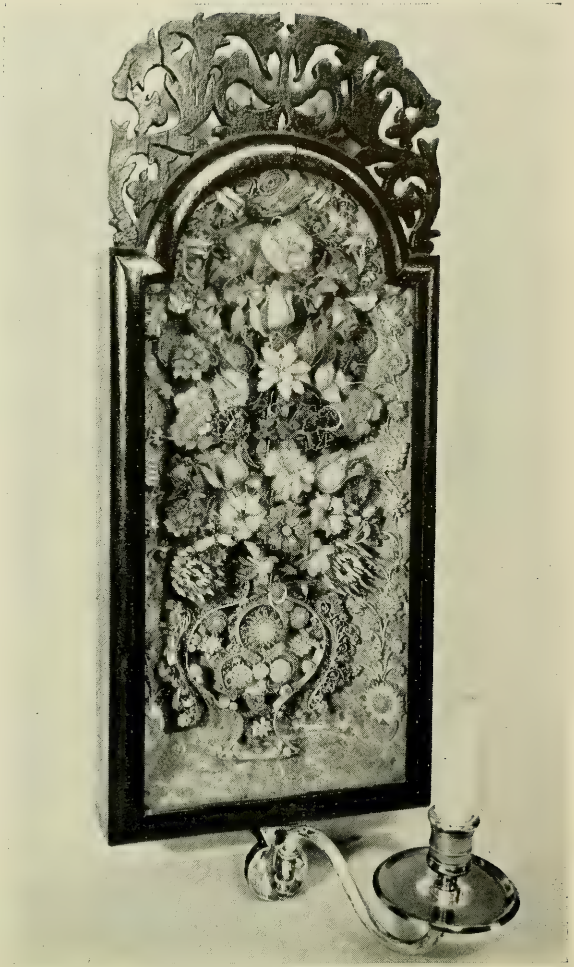
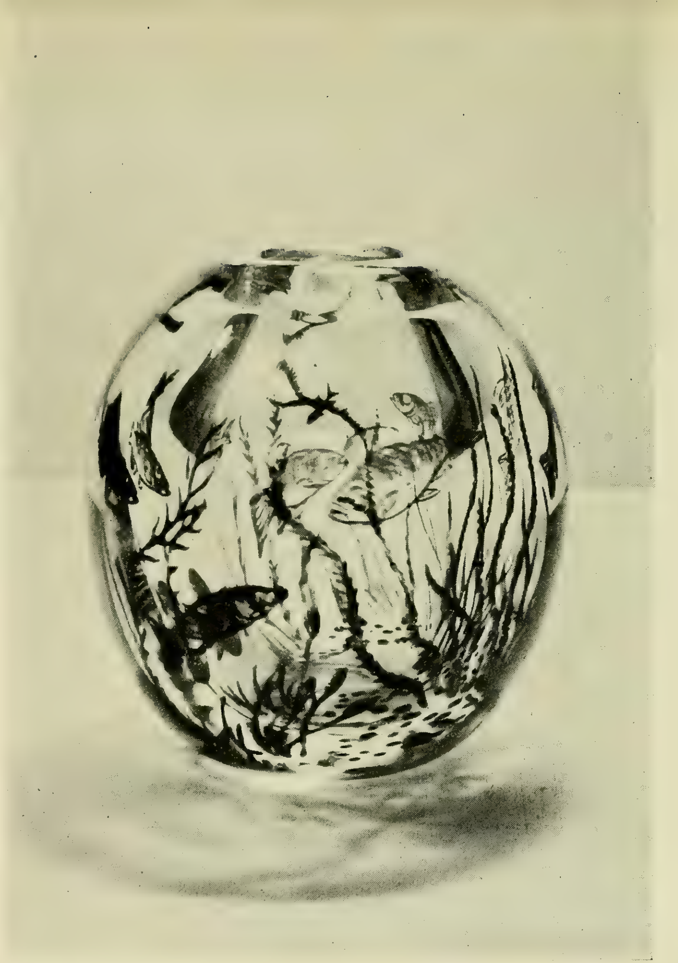


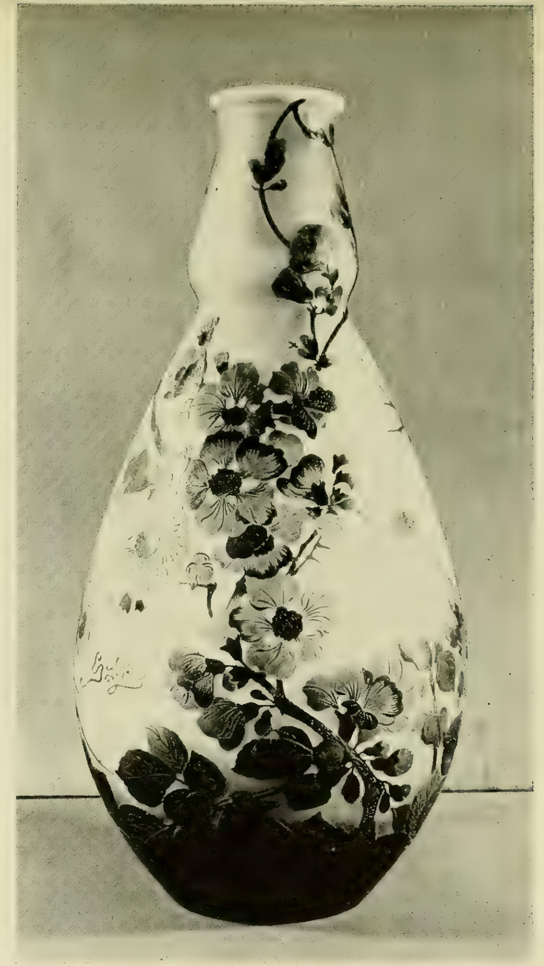
Plate from the Swan Service. Porcelain, decorated in colors and gilding. Meissen, 1737-1741. Modelled by Johann Joachim Kändler (1706-1775). Purchased in memory of Commander Henry H. Gorringe. Diameter 14$^{11}/_{16}$".



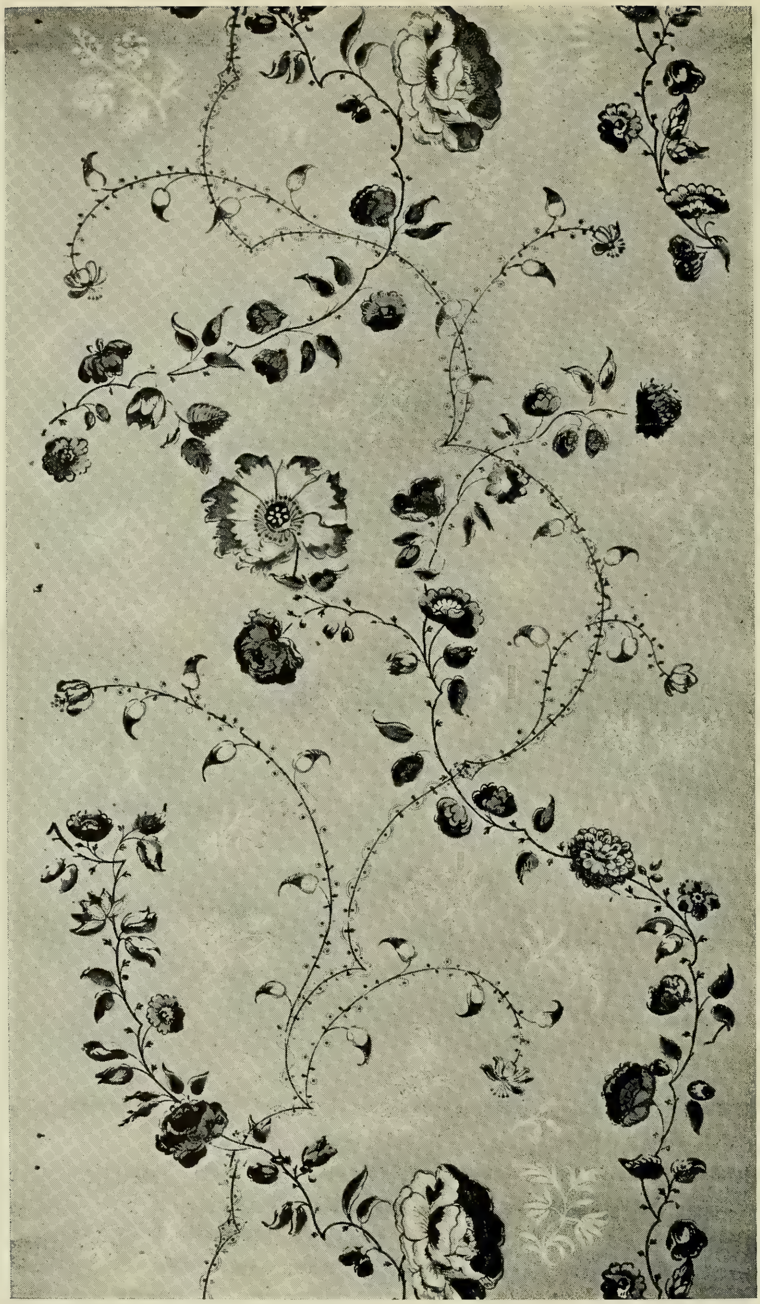
One of a pair of quill-work wall sconces. Boston, about 1720. Bequest of Natalie K. Blair. Height, 23½".



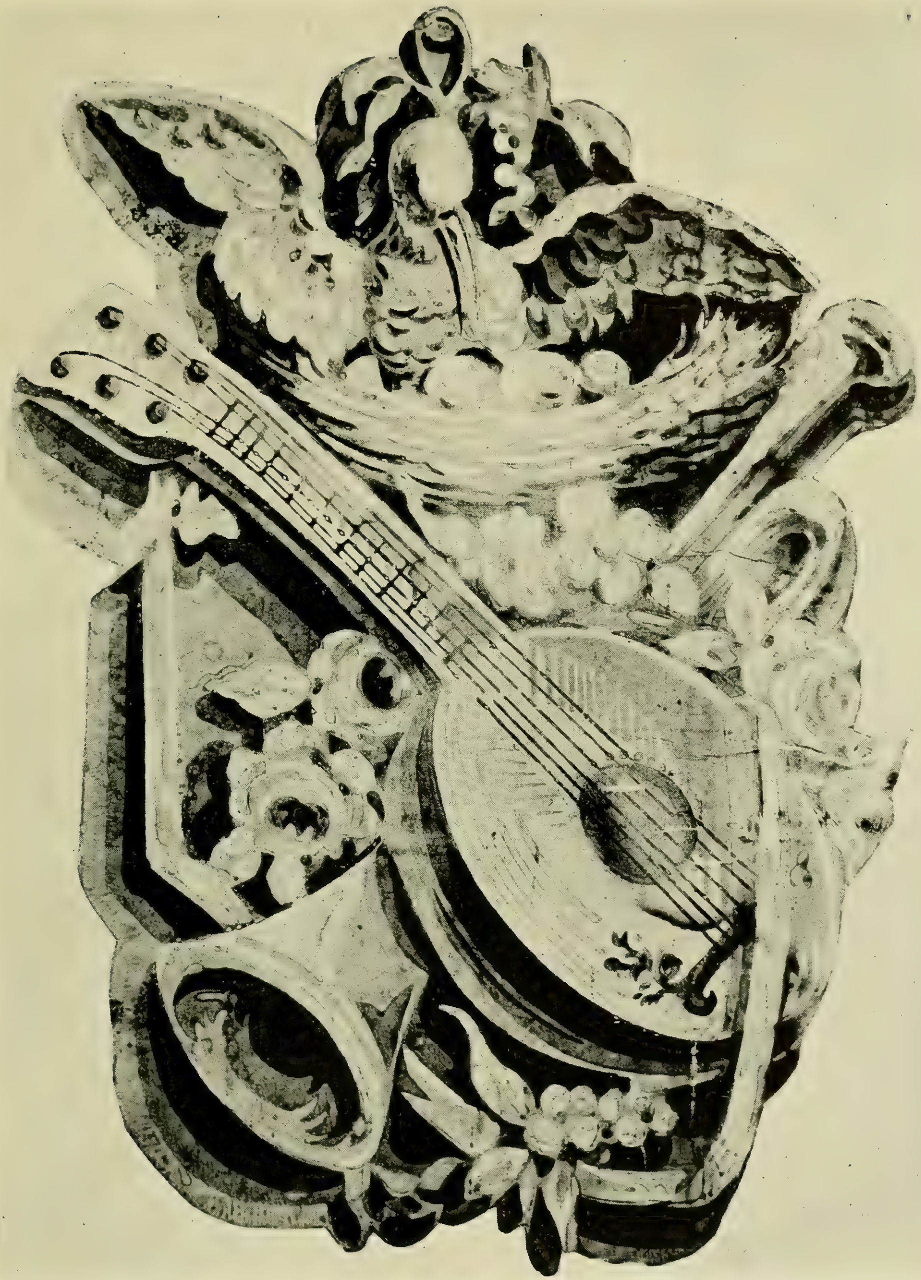
Vase; glass with encased decoration. "Graal Glass"; designed by Edward Hald (1883-). Sweden, Orrefors, about 1950. Given by Mrs. Henry B. du Pont. Height, 5⅛".



Vase; cased glass, engraved. By Emile Gallé (1846-1904). France, 1890-1900. Given by Harry Harkness Flagler. Height, 14⅝".



Wallpaper printed from woodblocks. Portion of an unused roll from Schloss Weikersheim, Württemberg. England, about 1765. Purchased, The Friends of the Museum Fund. Length of repeat, 35⅝″.



Wallpaper overdoor motif of a musical trophy, printed from woodblocks. From the Joseph Bonaparte House, Philadelphia. France, 1815-1830; probably by Mader Père. Given by George F. Kearney. Height, 13½″.

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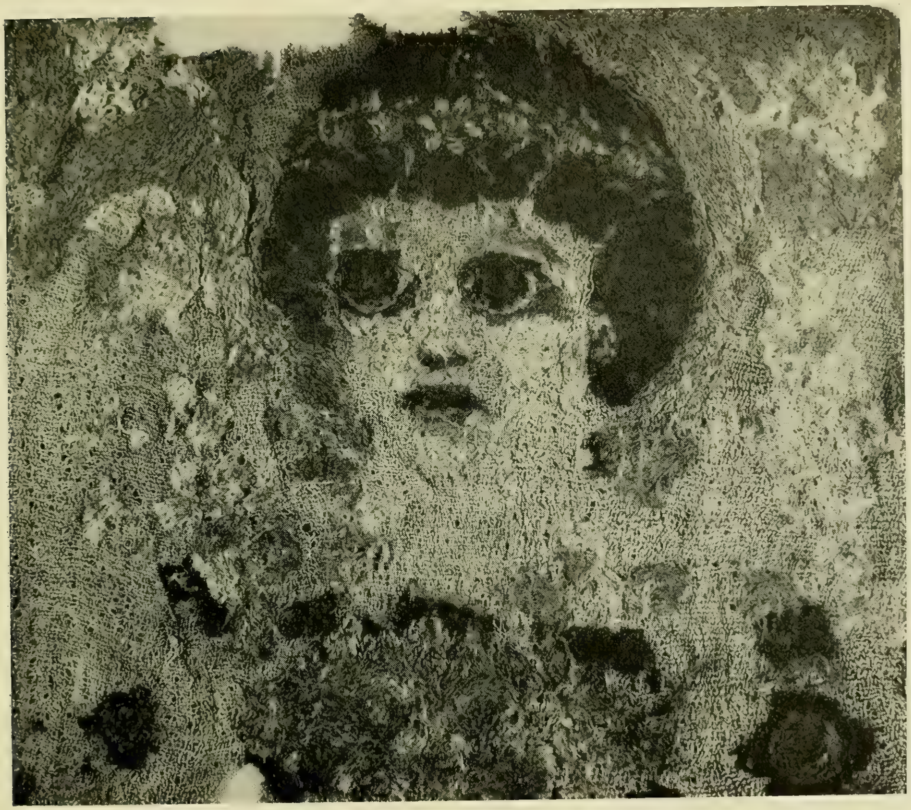
CHRONICLE OF THE MUSEUM FOR THE ARTS OF DECORATION OF THE COOPER UNION



Wreathed head; embroidery in colored wool on linen. Egypt, 4th century. Purchased, Au Panier Fleuri Fund. Detail shown, 5⅝" by 4⅞".

VOL · 2 · NO · 7 JUNE · 1955

THE COOPER UNION FOR THE ADVANCEMENT OF SCIENCE AND ART

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CHRONICLE OF THE MUSEUM
FOR THE ARTS OF DECORATION
OF THE COOPER UNION

VOL · 2 · NO · 7 JUNE · 1955

Why Textiles?

Since man stopped clothing himself in skins, went indoors, found it pleasant to cover himself at night, to shut out a sun too hot, a moon too bright, the drafts of cold air from the stone hall, the eye of a passing neighbor, it is clear that the materials for his clothing, the covering of his bed, the hangings of his windows, his walls, his doors, of his temple of worship, the clothing of its priests — all these and more have always been and remain so fundamental to existence as to be taken completely for granted by the average man. And essential they will remain until that awful day, envisaged by Mr. Huxley,[1] when we clothe ourselves in some "ersatz" stuff which, donned in the morning, is tossed into the waste basket at evening. Long may we be spared that test-tube fate. For there is in man a constantly recurring urge to incorporate in the making of the coverlet of his bed, the dress of his wife, or the robe in which his priest approaches the altar, some element of what is to him beauty — be it the inherited combination of stripes and plaids of his ancestors, the ornamentation of a delicate silk with some pattern that has reached him across remote trade routes, or the severe, symbolic contrast of certain colors in hieratic robes; and these have for him at the moment of creation an element of rightness, of fitness, that must have its expression.

The contemplation of these efforts toward some attainment of beauty at once involves the beholder in the endless crisscrossing of the currents in the history of ornament, of decoration. Only a slight examination of the long development of decorative arts makes it obvious that any collections purporting to illuminate this field must incorporate an ample survey of creation in the arts of weaving and embroidery.

The odd vague attitude of parts of the public toward the function of museums, toward Art (dangerous word!), is disclosed by the repeated experience of the former head of the textile department in one of the country's largest museums. Often, she said, when in summer the tourist from the

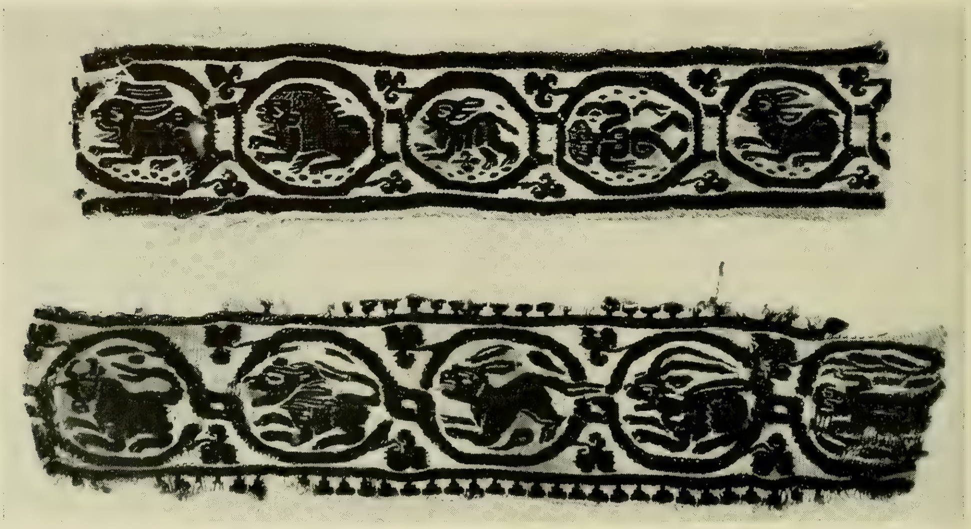


Fig. 1. Tapestry bands, dark blue wool on linen; white details. The racing animals have red tongues. Egypt, 4th-5th century. Given by J. Pierpont Morgan from the Miquel y Badía Collection. W. 2¾"; L. 11½" (upper). W. 2¾"; L. 13½" (lower).

south or west was much in evidence, she would find a weary lady at the door of the Textile Study Room, asking plaintively: "Please . . . *where* is the Art?" The visitor was then of course directed to the galleries of painting. Now, the point of this tale is that, in those days, to reach that study room the visitor would have passed through a series of galleries hung with the beautiful arts of the Near East, magnificent rugs, Persian miniatures, ceramics, silks; or by another route she would have wandered through galleries of Chinese art, then into a corridor where superb costume from the 17th to 19th century was arranged. None of what she had seen was, to her, art. Only the painting on canvas was so defined.

"An art museum," writes one who should know, "is usually thought of as a gallery for the display of masterpieces. But possibly we should think of it rather as a visual reference collection of cultural history. Now, contrary to popular belief the history of culture is not written about the isolated masterpiece, but is drawn from the study collections." [2]

The value of the study collection was of course basic in the beliefs of the founders of this Museum years before the above words were published, when they planned a series of reference collections, quickly available for active use by workers in and students of the arts of decoration. At once, in its first years, the Misses Hewitt began seeking textiles as essential to their plan, and the testimony of early gifts as support of their theory is most notably exemplified by one of the greatest collectors of our age, Mr. J. Pierpont Morgan, who, sympathetic and interested in their efforts, purchased in Europe three famous collections in 1901 and sent them to the Cooper Union Museum.

By this truly Maecenean gift Mr. Morgan lifted the textile collection of this young museum into a position of importance and great potential usefulness to the student of design, of techniques, of cultural history, and to the designer himself, that individual whom most especially as a link with industry it was hoped this Museum would serve.

The range of this group of materials, numbering something over one thousand pieces, is extensive in periods covered, country of origin and, of course, in types of decoration and construction. Referred to intramurally as "the Morgan Collection" it actually contains three: [3]

The Stanislas Baron collection, from Paris, numbered some two hundred thirty-one pieces; about one hundred fifteen were late classic and Coptic, over fifty-two Egypto-Arabic, and the balance miscellaneous, among them several large panels of early European embroideries.

The collection of Antonio Vives y Escudero, from Madrid, numbered three hundred thirty-seven pieces, among these many 16th- and 17th-century silks, velvets, and interesting weaves of linen and wool or silk and wool, mostly of Spanish or Italian origin, though two fine Peruvian mantles, post-Columbian, were in this group.

Finally the collection of Francisco Miquel y Badía, purchased from his widow in Barcelona, listed four hundred two pieces and is perhaps the best known of the three groups now forming the Morgan Collection, for it contained many of the finest of the medieval stuffs: several Byzantine examples, delicate Egypto-Arabic fragments, the extraordinary group of Hispano-Moresque silks, 14th-century Italian silks, a group of the rare German medieval printed linens as well as Near Eastern silks, even several fine 15th-century tapestry-woven fragments from China of the Ming dynasty, as well as a small survey of Peruvian weavings. Silks, velvets, embroideries and a variety of European materials from the 15th through the 18th centuries, Spanish, Italian, French, all of exceptional quality or interest, complete the range of this truly extraordinary compilation of examples of textile art.[4]

However, Mr. Morgan's was not the first gift toward the foundation of a

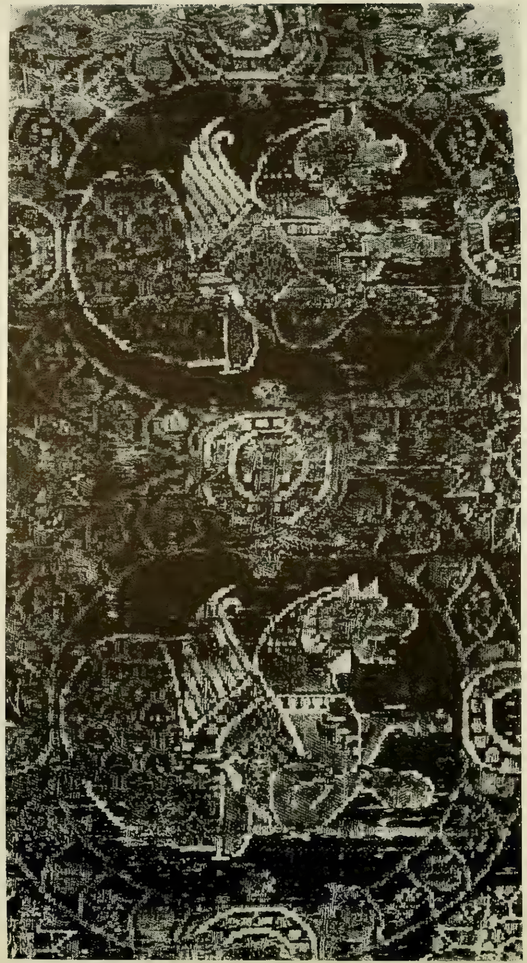


Fig. 2. Winged Monster. Silk; dark blue ground, red, old gold, green. Byzantine version of Sasanian motive, 7th-10th century. Given by J. Pierpont Morgan from the Miquel y Badía Collection. W. 6½″; H. 12″.

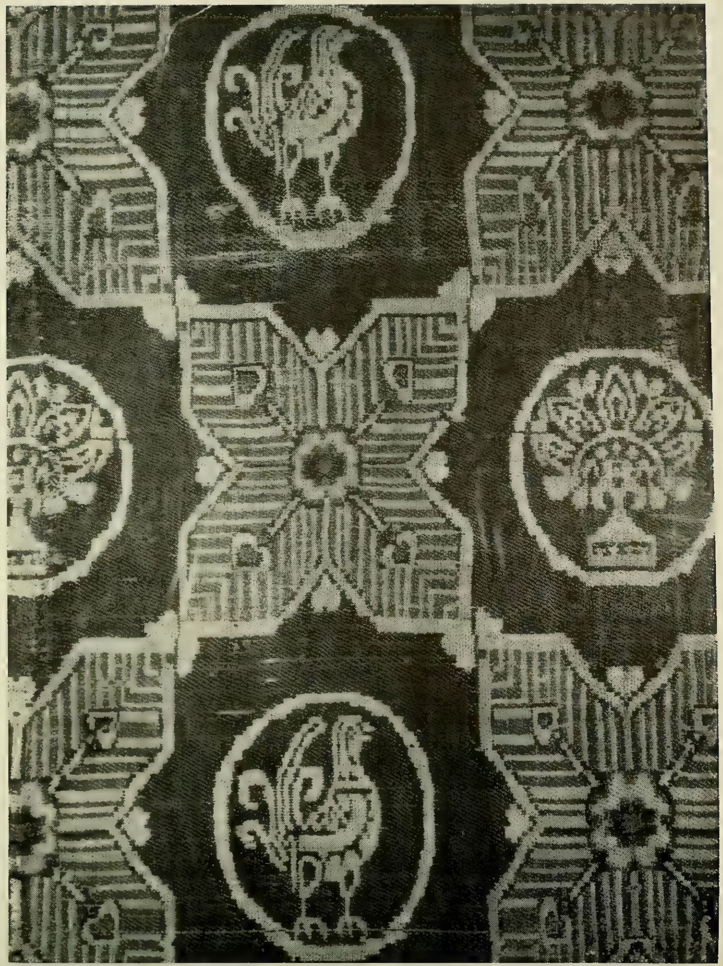


Fig. 3. Cock in eight-pointed star. Silk; dark blue, yellow, green. Byzantine treatment of Sasanian motive, 8th-9th century. Given by J. Pierpont Morgan from the Miquel y Badía Collection. W. 7″; H. 9¾″.

textile department. Turning over our catalogue cards from the first year, 1896, of published records, we encounter a series of names of donors indicating support from many sorts and conditions of men and women.

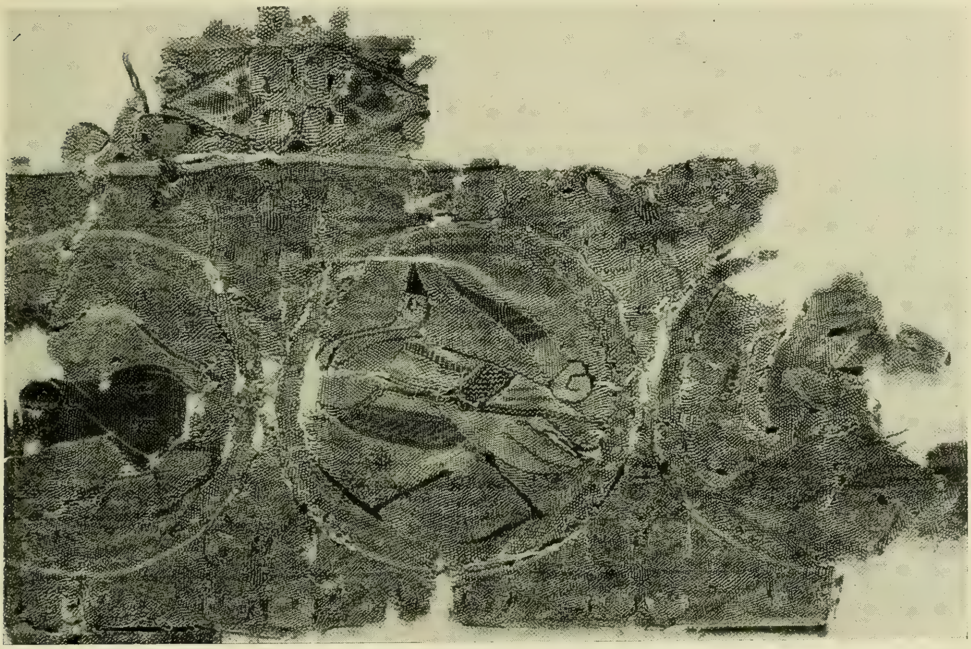


Fig. 4. Border fragment, tapestry, silk and gold; red, green and brown on gold ground. Hispano-Moresque, 13th century. One of six similar fragments given by J. Pierpont Morgan from the Miquel y Badía Collection. Detail shown, 3¾″ by 4½″.

The first is, rather naturally, a gift from the Misses Hewitt themselves of one hundred fifty-two pieces from the Jarves Collection. These, Miss Eleanor Hewitt has recalled,[5] were purchased years before when the sisters were under sixteen, before they had dreamt of a museum, but apparently with some intuition that these textiles, mostly of the 16th and 17th centuries, should be salvaged. Let us note a contact, over a period of time, between these young experimenters and that earlier pioneer in the history of art in America, whose collection of early Italian painting has brought such lustre to the Yale University Art Gallery.

There follow in our file cards, 1897 through 1900, names of donors known in their time for a variety of reasons, whose gifts attest their belief in the

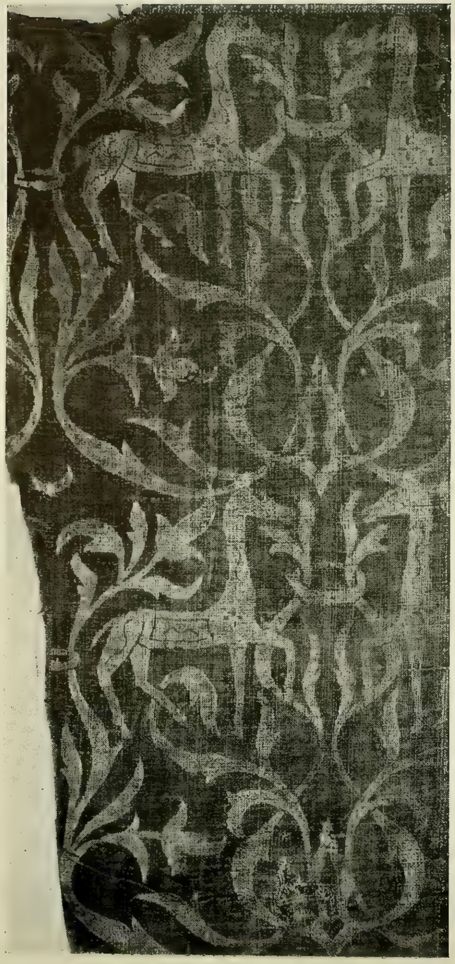


Fig. 5. Blue linen, printed in silver. Germany, 12th-13th century. Given by J. Pierpont Morgan from the Miquel y Badía Collection. Length of repeat, 9″.

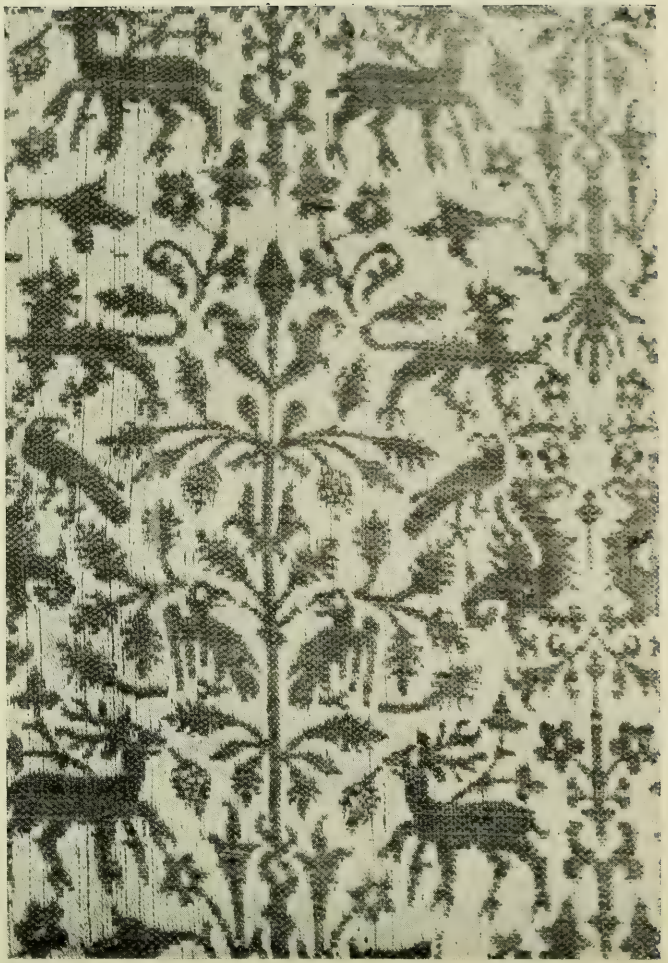


Fig. 6. Reversible silk fabric, green and rose. Italy, 14th century. Given by J. Pierpont Morgan from the Miquel y Badía Collection. Detail shown, 4″ by 6″.

plans of the Museum: Mrs. James W. Pinchot; Elsie de Wolfe, to become one of the best known of the country's decorators; Raimundo de Madrazo, the Spanish painter; M. Chatel of the famous old French firm of Tassinari and Chatel; George Arnold Hearn, merchant, always a supporter of the early efforts of the founders; and in 1899 a group of thirty-five fragments of Persian and Turkish silks, 16th-18th centuries, from the great collector-dealer Dikran Kelekian. In 1900 appears the name of one of the country's most distinguished writers, who added to her gifts in fiction and criticism an expressed interest in decoration,[6] Edith Wharton. A small group of Greek Island embroideries, possibly gathered by her on that journey "ever memorable, that raked the Mediterranean as far as the isles of Greece,"[7] was to become the foundation of this section of our embroidery collection.

Clyde Fitch, the playwright, Worth, the Paris dressmaker, Diana del Monte, another interior decorator, appear among early donors; and always and continuously over the years recur the names of the founders, of their mother Mrs. Abram S. Hewitt, and of gifts and bequests of various members of the family – the Erskine Hewitt bequest of 1938 and the gift of Norvin Hewitt Green in the same year.

Throughout its development this Museum has attracted and continues to attract the interest of collectors, of industry, of perspicacious dealers, of connoisseurs and of just plain intelligent folk who are steadfastly generous in their encouragement, not only by gifts, but by placing at our service their special attainments of knowledge or training. Just as Miss Eleanor Hewitt has chronicled the early help of Tassinari and Chatel in Paris, so we might record today the yearly support of American textile firms. Through many years one observes as a donor the name of the late Herman A. Elsberg, one of the foremost dealers in antique textiles of this country, who combined with his extensive knowledge of the whole field of early materials the ability to conduct in Lyon a manufacturing business of fine silks, a large group of which the Museum received from his estate. But further, our records reveal how frequently his advice and wide acquaintance among scholars and museums were of service to this Museum. So today from specialists in the business world this Museum receives similar intelligent cooperation. To many experts whose research and experience in the gathering of textiles is so generously shared, the Museum has cause to be constantly grateful.

The growth of such a Museum as this, in its beginning an experiment, and always independent of any subvention from public funds, would not have been possible without the devoted active friendship of many whose contribution has been, and is today, made not only in gifts of objects or money, but in an intelligent helpful participation that might be called extra-curatorial. Much of the progress of such an institution depends on its

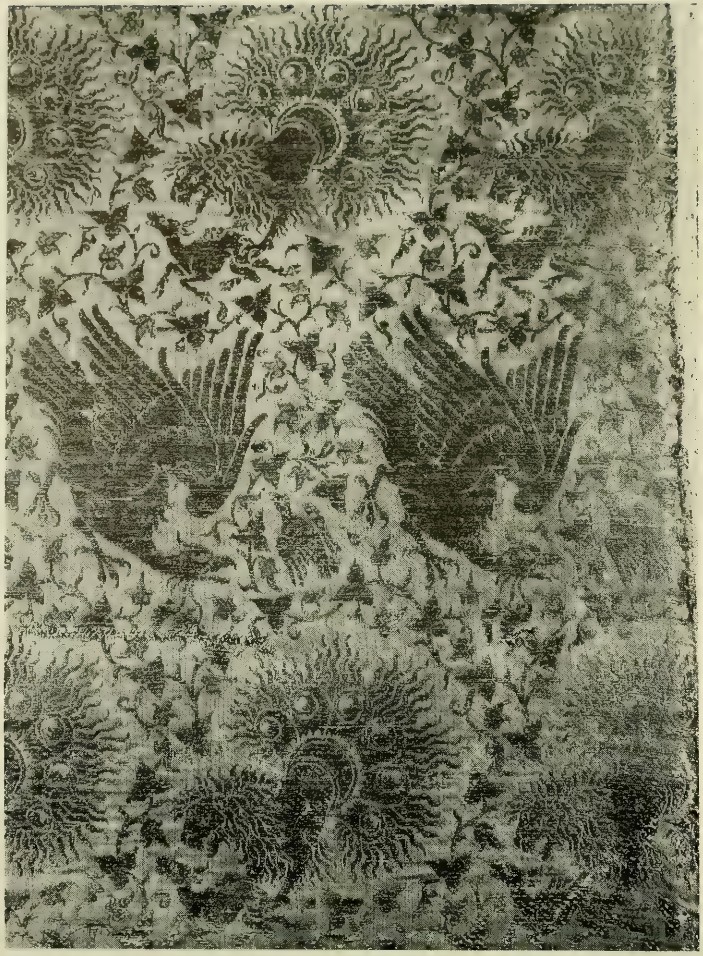


Fig. 7. Hunters and Hunted. Green silk, design in gold and blue. Italy, Lucca, 14th century. Given by J. Pierpont Morgan from the Miquel y Badía Collection. Length of repeat, 11⅝″.

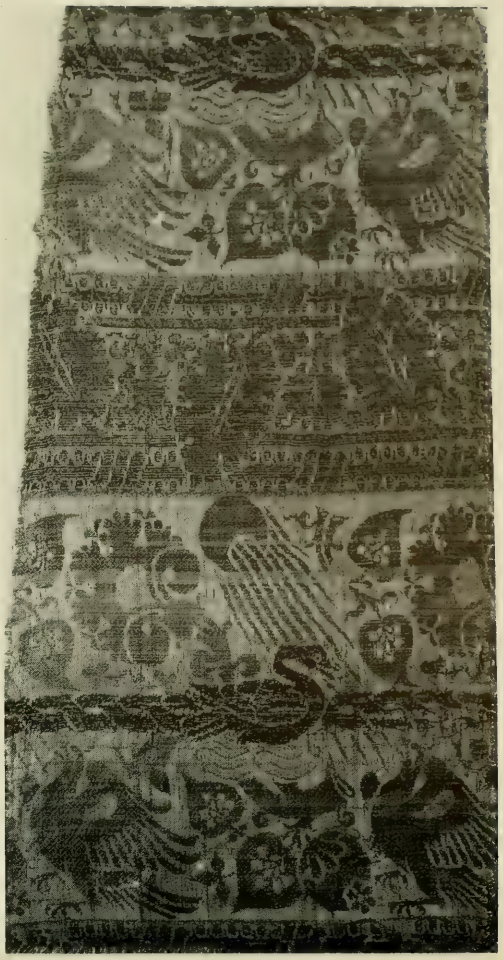


Fig. 8. "The Swimming Swan of Lucca." Silk, rose ground, design in green, white and silver. Italy, Lucca, 14th century. Given by J. Pierpont Morgan from the Miquel y Badía Collection. Length of repeat, 11⅝″.

interpretation by its friends to the world at large; and countless acts of interested advice, within the circle of the Museum's Advisory Council and the antecedent Board of Directors, have moved it forward.

While it is not the purpose of this study to chronicle donors to the textile collection, but rather the collection itself, the ramifications of its expansion tempt us to these added notes. Lace, a subject of study and collection by talented amateurs in the first years of the twentieth century, appeared early among gifts; and this section was steadily built up by such donations as the laces from the collection of Mrs. J. P. Morgan, given by her daughter, Mrs. George Nichols; a group from the distinguished collection of Mrs. Morris Hawkes, another from Mrs. Robert B. Noyes, and later from Mr. and Mrs. R. Keith Kane.[8] By 1950 this Museum found itself the possessor of an extremely good lace collection, which in that year was remarkably enriched when Mr. Richard C. Greenleaf presented us, in memory of his mother, Adeline Emma Greenleaf, with fifty laces which brought to our collection many well-known examples of this lovely disappearing art.[9]

Children's dresses and accessories of dress from many lands were the gift of Mr. and Mrs. De Witt Clinton Cohen in 1940. The bequest of Mrs. W. P. Treadwell in 1916 had provided the department with early 19th-century accessories of dress. As space became a problem for either the exhibition or proper storage of costume, and as other sources of costume information had meanwhile developed in this city, it was decided that complete costume would not henceforth be acquired unless the material or embroidery decorating it was an essential contribution to the textile collection. However, many delightful auxiliaries of dress, as gloves, caps, aprons, purses, and the like, for centuries the field for much beautiful design, are here and are of great use.

Samplers to the number of two hundred sixty-three, from all countries and periods, were bequeathed to the Museum by Mrs. Henry E. Coe in 1941. In 1943 the firm of W. and J. Sloane presented us with a group of one hundred seven printed cottons, from the collection of William Sloane Coffin. The forming of this collection had been the work of an expert, Mrs. Agnes Johnson Holden, and the section which came to this Museum was a much-needed addition to a group of materials so steadily used.

Growth of the collection continued not only by gift but by purchase to fill in some category not yet represented; or to acquire, perhaps from the break-up of a well-known collection, pieces of exceptional merit. So, in 1941, the Advisory Council voted to purchase the rare 18th-century silk, "the Sun Chariot," from the sale of the Elsberg collection. In 1951, the fragment of 6th-century silk in late classic design, men gathering grapes,[10] was purchased from Dikran Kelekian. Following his death two fine velvets, one

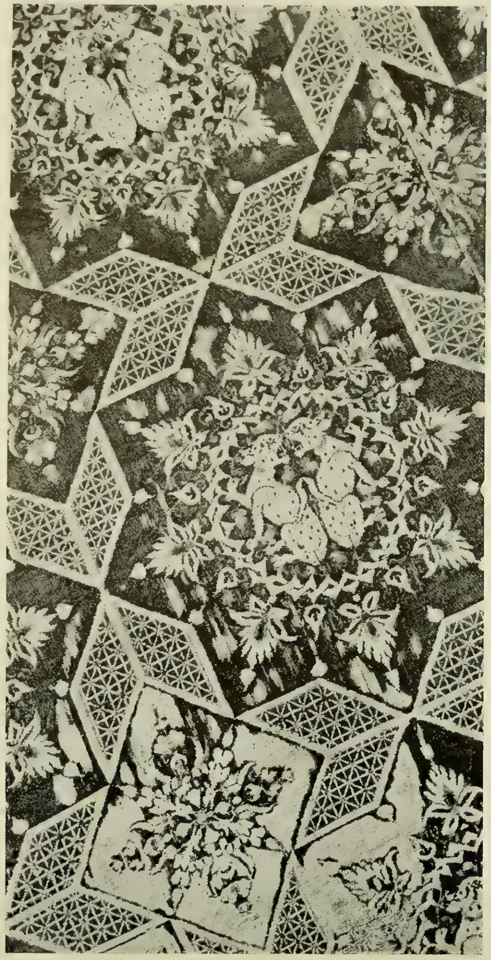


Fig. 9. Dark blue silk with design in gold and light blue. Italy or Spain, 14th century. Given by J. Pierpont Morgan from the Miquel y Badía Collection. Length of repeat, 7¼″.

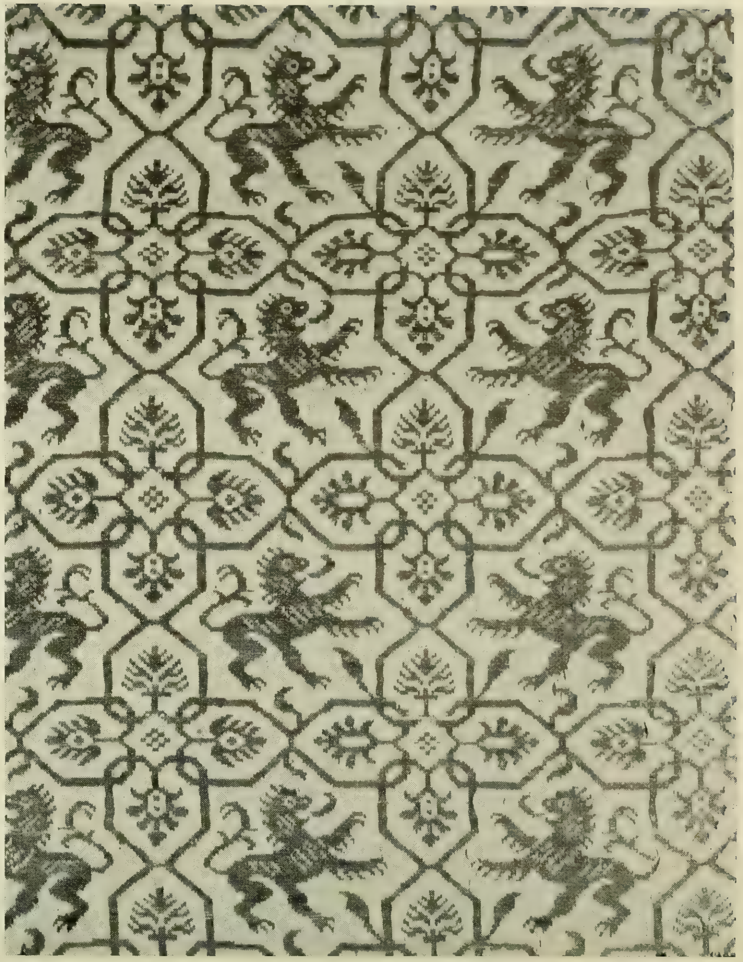


Fig. 10. Rampant lion. Red on cream ground; linen and wool double-cloth. Spain, 16th-17th century. Purchased, Anonymous Funds. W. 10⅝″; H. 13¼″.

Safavid Persian, of the period of Shah 'Abbas, one Turkish, of the 16th century, were acquired from this famous collection.

Recently an opportunity arose to acquire unusually handsome examples of Indian textile art, of both painted and embroidered cotton, when, following the sale in England of the contents of Ashburnham Place, Sussex, two hangings from a set of six, one in each technique, were acquired by this Museum. The interest in these lay not only in their extraordinary beauty of design and color, but in the fact that half of the set were painted, half embroidered in brilliant silk chain stitch, from the same design.[11]

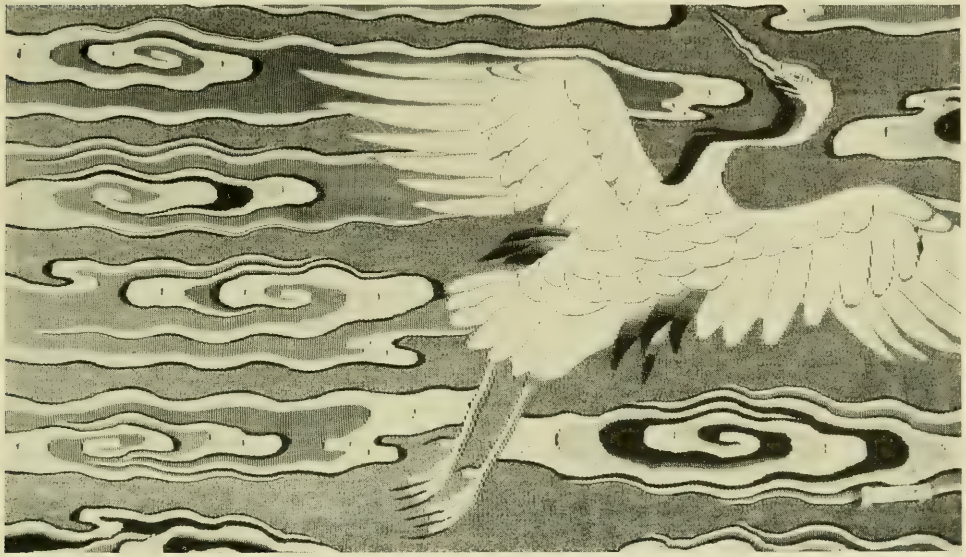


Fig. 11. Crane among clouds (detail). White, colors, gold ground. Slit tapestry. China, Ming Dynasty, 15th century. Given by J. Pierpont Morgan from the Miquel y Badía Collection. Detail shown, 12″ by 6¾″.

Along one wall of our study room stands a large cabinet housing, in its upper section, French and German weaving books of the early 19th century, wood blocks for printing cotton – French, American, even Japanese – and one hundred forty-six sample books. It would appear that, early in the Museum's career, manufacturers and dressmakers began bestowing these books; friends have added to, and several purchases enlarged, this very useful section. The little "swatches" in these books range from 1784 in one portfolio that bears this date, through 1829 where, in a small volume

(Fig. 28) apparently brought from Bury in England to Providence, are shown printed cottons with records of dyeing experiments; and a far larger collection from a single mill, the Old Pacific Print Works, Lawrence, Massachusetts, represents the years 1864 to 1868. In other volumes we find tie silks from Paterson, printed cottons fashionable in 1906, Rodier's wools, striped and checked cottons of India. Apparently age does not wither nor custom stale the infinite variety of their use, for again and again designers have recourse to these worn pages.

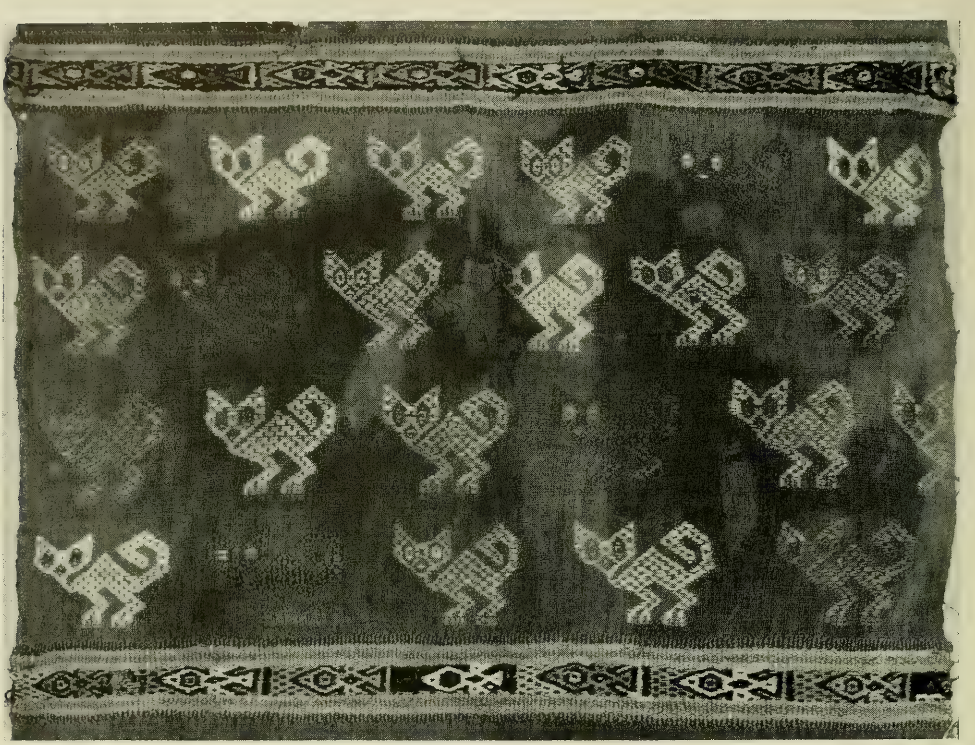


Fig. 12. Brown cotton, brocaded in white, red and light brown wools. Peru, Central Coast, 900-1400 A.D. Given by J. Pierpont Morgan from the Miquel y Badía Collection. Detail shown, 16¼" by 14".

Inspiration for textile design is of course found in other departments of the Museum. In the Department of Drawings and Prints is contained a delightful variety of original studies in white or colored gouache for embroidery and textile composition, of the 18th and early 19th centuries, as well as a group of 18th-century mises-en-carte for weaving, in color, one

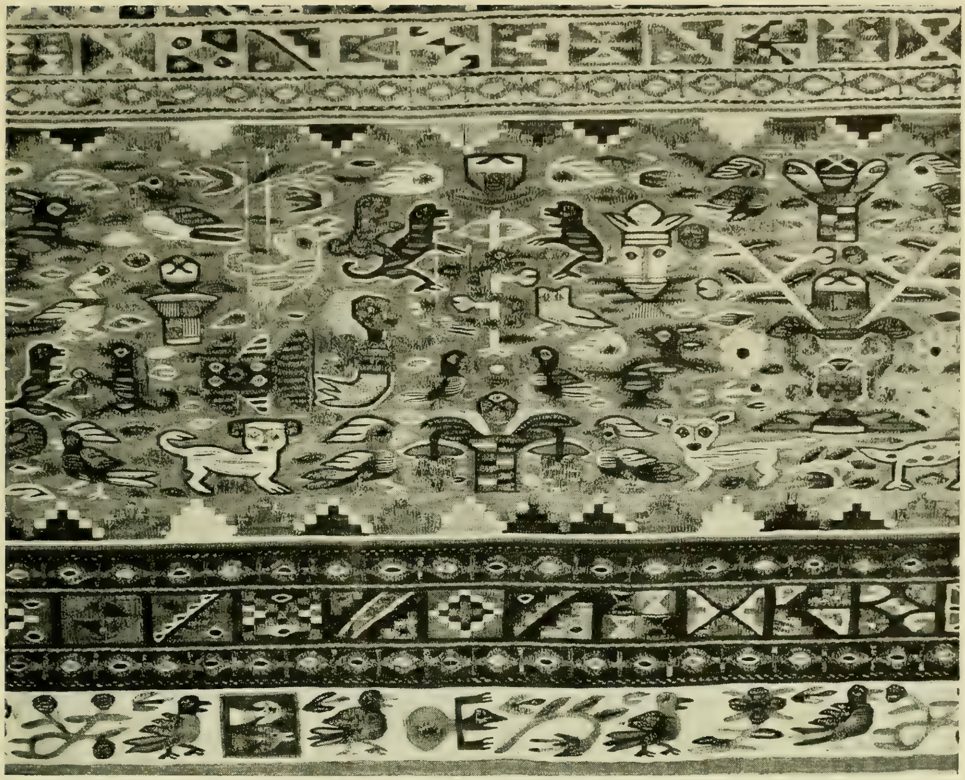


Fig. 13. Detail from a mantle, tapestry woven in colored wools and gold. Peru, 16th-17th century. Given by J. Pierpont Morgan from the Vives y Escudero Collection. Detail shown, 17″ by 13¾″.

of which is illustrated (Fig. 25). Another unusual group is the series of original cartoons for French printed cottons, representing the years from 1770 to 1820, with trial proofs for some of the designs.[12]

In the fifty-eight years since the Museum opened, the textile section has grown from its modest beginning with the group from the Jarves collection, was catapulted into importance by the Morgan gift, has now reached in holdings approximately 8,500 items, ranges in time from two hundred fifty years before Christ (exclusive of a few mummy wrappings) to the present, and offers material from the Near and Far East, Europe, England, South America and our own country.

Why, you may ask – if you have persisted thus far – why should a textile collection of this size be maintained and why do we steadily exert ourselves to develop the collection still further?

The answer is obvious, though not simple to state, but let us put it thus: if there is art in the fine form of a chair, or the cup man raises to his lips, or the design of the lamp upon his table, or the lantern at his door, or the line of the door itself, so is there art in the pattern, be it simple or complex, of the stuff with which he curtains his windows, covers his chair, or which composes that dress of his wife, or the scarf around his neck. Art – or banality.

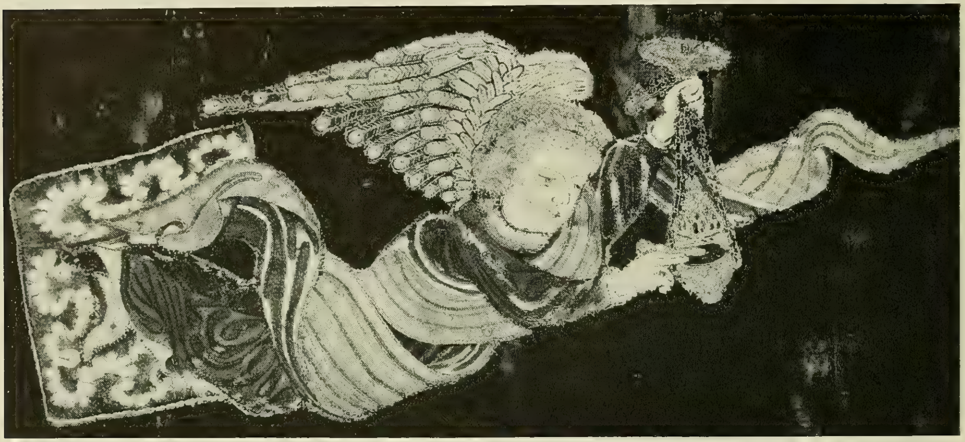


Fig. 14. Censing angel. Embroidery in colored silk and metal thread. Germany, 15th century. One of a group of embroideries from an antependium. Given by J. Pierpont Morgan. L. 20¼"; H. 8¼".

The present tense in the above is used in a general, historic sense, for we cannot separate ourselves from our past culture. As the understanding of our cultural history must include a survey, however cursory, of design, either as an exemplification of advance or decadence, as well as an expression of the psychology, the taste of the moment, so is it essential to examine the wide field, the ramifications of design, and construction, and what lies behind them, in the history of textile arts.

Man turns constantly to the past, his past, to learn. He is taught the history of his country, his race, the accomplishments of many races. He cannot examine the past without encountering in every epoch the business of textiles; for quite aside from their aesthetic value, the textiles of any civilization have been, quite literally since time immemorial, of basic economic importance – "big business" – and obviously so remain today.

Archeologists of today, exhuming the past, constantly bring this point to our attention. For instance a late (though not the earliest) example occurs in the report by Welles Hangen, from Ankara, Turkey to *The New York Times* for February 5, 1955, concerning the large find of cuneiform clay tablets at the site of an ancient Assyrian trading settlement, dating from about 1900 B. C. Here the Assyrian traders were welcomed by the local rulers "because they brought with them tin, *textiles* [italics ours], drugs, and other adornments of the more advanced culture of Assur."

It is a temptation to dwell at length on traffic in textiles throughout history, for the story of their making and movement about the world is almost as interesting as the materials themselves. But, flitting lightly over our time, we may glance back at a few illustrations. Aside from all the known intercourse of the Roman Empire with far lands, in the constant East-West trade around the Mediterranean basin throughout the Middle Ages, textiles played an important part. Church records of the 8th and 9th centuries specify the silks ordered from the Levant, and the presence in European church treasuries of such materials is proof today of their importance.

Silk culture, as we know, was carried to Spain by the all-conquering Mohammedans. By the tenth century an active trade existed between Spain and Egypt and in the early Middle Ages the beautiful silks of Arabic Spain were exported.[13] The prosperity of Florence in the 13th century, which ultimately led to her 14th-century pre-eminence as banker to Europe, was founded upon her famous cloths of wool. These were consumed not only in Europe but were shipped to the East, for the East-West trade worked both ways. In Cairo there existed a special market for western textiles.[14] Venice, as the port of trans-shipment of Europe's goods, rose to great power; to her were shipped the wools of Spain, the linens of Reims, the wools of Flanders, and from her quays went out the ships to trade these goods in ports about the Eastern Mediterranean and return with all the merchandise of the East, in which rich textiles played an enormous part.[15]

Certainly the western trade to and into the East was well established by the mid-13th century, for we note that when the venturesome Venetian jewel merchants, Maffeo and Nicolo Polo, set out on their first journey to reach China, they started from Soldaii in the Crimea where they had a counting house. From the long and truly marvelous story of their second journey, begun in 1272, on which Nicolo's son, Marco, accompanied them, we have space for only brief citations. In the seventeen years that Marco journeyed about the kingdom of Kublai Khan he saw and, in his history, mentioned much of the silk weaving in China, of the beautiful stuffs of silk or silk mingled with gold which the Chinese weaver knew so well how to execute. In the great city of Khinsai (the modern Hangchow) with its twelve gates, he found, as in other parts of China, Mohammedan merchants settled and active. Of the merchandise traded in Khinsai he reported above all silk,

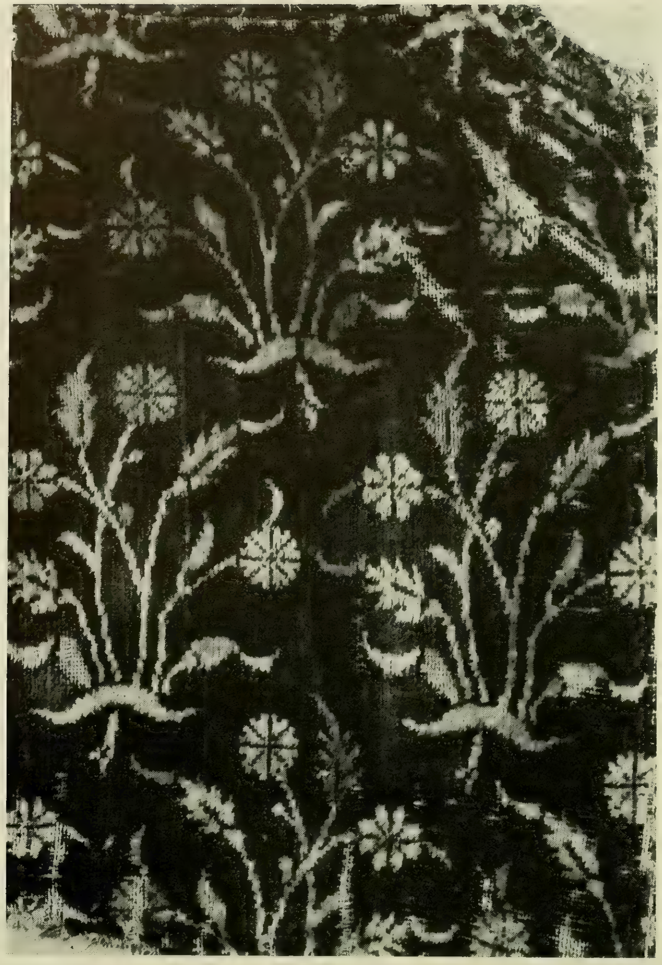


Fig. 15. Blue silk cut velvet; flowers, yellow, rose, and white. Persia, 16th century. Given by J. Pierpont Morgan from the Miguel y Badía Collection. Detail shown, 5½″ by 7¾″.

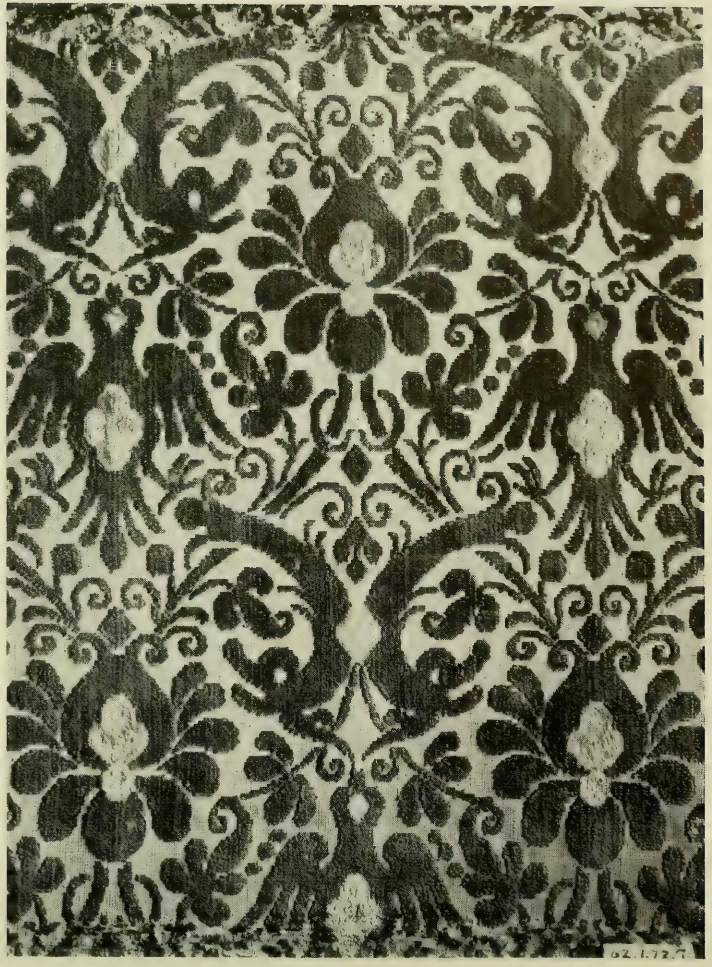


Fig. 16. Silk velvet, green, with touches of rose, on cream ground. Spain, 15th-early 16th century. Given by J. Pierpont Morgan from the Miquel y Badía Collection. Detail shown, 8″ by 10¾″.

and estimated the total amount which entered the city each day to be a thousand wagon loads.[16]

Summing up the evidence of opened trade with China, Heyd says it was the raw silk and the stuffs made of silk which above everything else the merchants of the West sought in the Chinese market.[17]

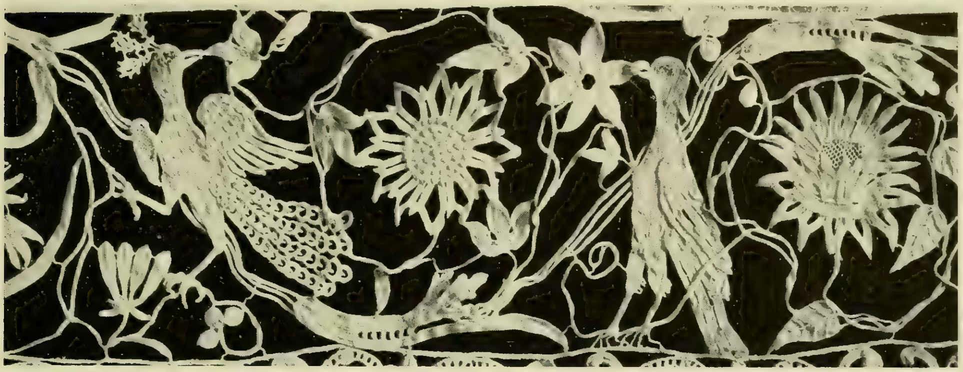


Fig. 17. Detail from border of an apron. Needlepoint lace, "punto in aria." Italy, second half of 16th century. Given by Richard C. Greenleaf, in memory of his mother, Adeline Emma Greenleaf. Detail shown, 4⅛" by 10¾".

Patterns of Chinese silks reaching the West were to have a marked and refreshing effect on the spreading art of Italian silk weaving in the 14th century, of which those of Lucca became so famous.[18] And those same silks of Italy, moving northward by old trade routes and through the medieval fairs, were much sought by the French and the English, and most elaborately used in the court of Burgundy, concerning whose luxury and behavior in the dying days of chivalry that overworked word "fabulous" is for once correct.[19]

Indeed the feasts, parades, jousts, celebrations, civil and religious, must have been a boon to the world's weavers, and descriptions of materials used and worn amaze us, leaving only Hollywood as a possible contemporary comparison. No ticker-tape parades greeted visiting notables, for when in 1360 four English barons, on a diplomatic mission, arrived in Paris they found, "toutes les rues jonchées et parées d'herbe, et entour parées de drap d'or." Twenty years later Charles VI, returning from his coronation in Reims "où il avait été sacré vêtu d'une robe de soie tout éclatante de fleurs de lis d'or," entered a Paris where "les rues et les carrefours de la ville étaint tendus de tapisseries diverses comme des temples."[20]

They ordered these things better in France!

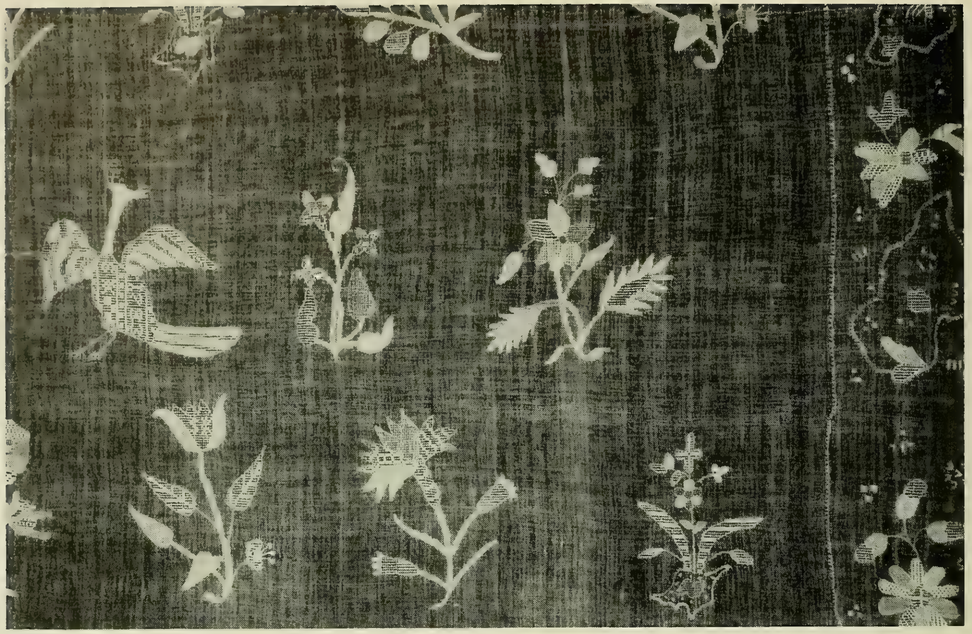


Fig. 18. Detail from white muslin embroidered apron. Initials S. K. and date, 1733, in body of bird. England, first half of 18th century. Bequest of Mrs. Henry E. Coe. Detail shown, 20½" by 12¾".

Tapestries, so extensively woven in the Middle Ages, were a matter of artistic patronage by those same Dukes of Burgundy, regarded not only for their beauty but as objects of value. They were presented as kingly diplomatic gifts, were used as ransom, and were of sufficient value to be sold in the clearing of the estate of Philip the Bold in 1404.[21] Moreover these tapestries consumed much good English wool. Cloths of wool, basic for all uses throughout centuries, which were a most profitable product of the looms of Ghent, Bruges, Ypres, and other Flemish centers in the Middle Ages, depended on a steady flow of raw wool from England and so built up an economic interdependence that was woven into the histories of the Lowlands and England.

In England's House of Lords today the Lord Chancellor "sits upon a stout ungainly object," the Woolsack, reminder and symbol of the basis of England's prosperity and greatness up to the time of the Industrial Revolution. The wool shipped by the Merchants of the Staple to the Continent, in the Middle Ages, later manufactured in her own lands and exported as cloth the world over, was indeed, until the coming of cotton, the most lucrative trade of the country.[22]

It was next the trade in cotton that became of major economic importance in Europe after the opening in 1498 of sailing routes to India and the Far East. The competition between the various East India trading companies, of Portugal, Holland, France, and England, was extensively motivated by ambition to control the business in Indian "calicos" and the painted cottons, soon to produce the craze for "indiennes" in France and "chintz" in England, in short to father the great business of printed cottons in Europe.

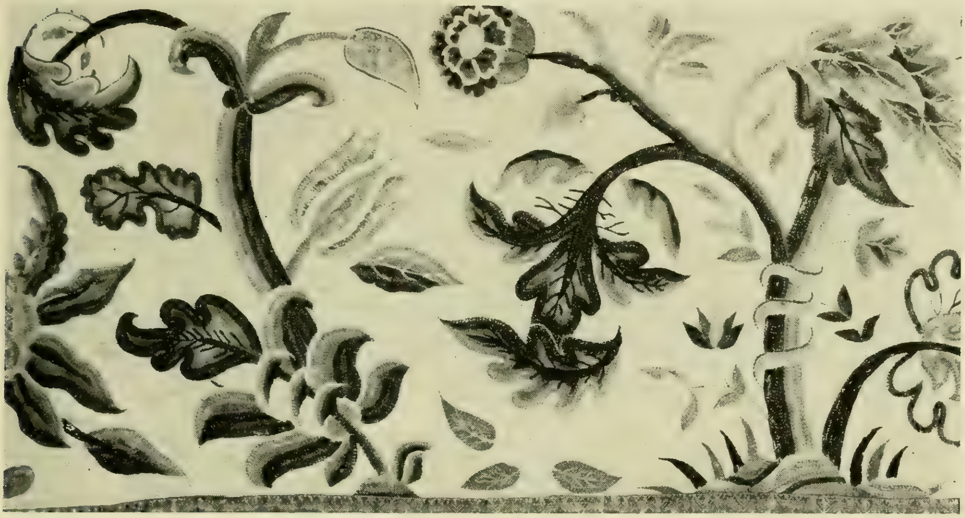


Fig. 19. Embroidered valance; polychrome wool on twill weave cotton. England, late 17th-early 18th century. Purchased, Au Panier Fleuri Fund. Detail shown, 16½" by 32".

Into this huge East India trade the little sailing ships from Massachusetts poked their prows, in the late 18th century, fared out over the Atlantic with mixed cargoes on some triangular voyage which might take them to Riga to turn over a cargo, buy Russian linen, then out east to Bombay or Calcutta where they might lay out $20,000 in a variety of Indian textiles whose names today are strange to our ears, save only chintz, seersucker and that long-staying article the Indian shawl.[23] The clipper ship trade round the Horn to China, from ports of our Eastern seaboard, familiarized our forefathers with the silks of that land, just as in Europe earlier in the 18th century once again silks of China were discovered, indeed all the arts of the Far East were to become favorites of fashion. As for the story of cotton in our own country,

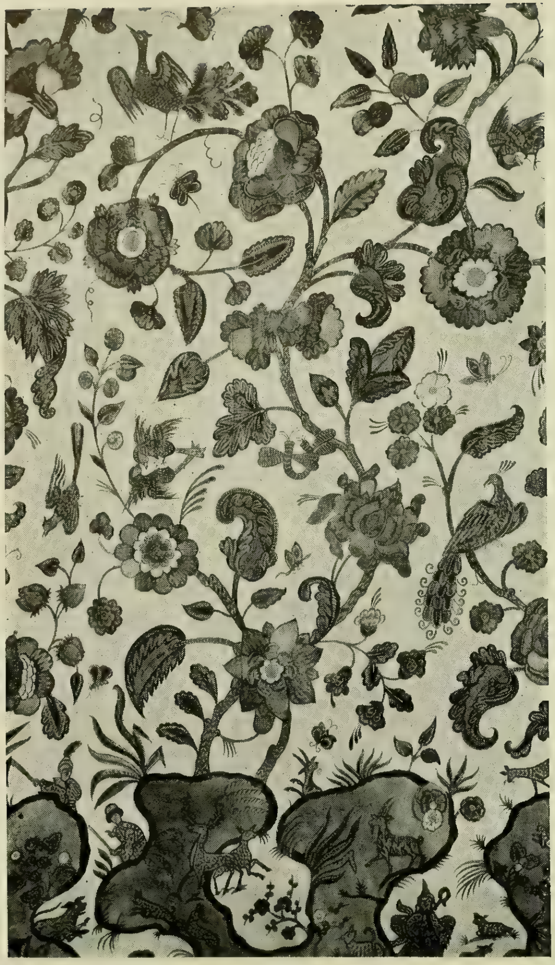


Fig. 20. Curtain of painted and dyed cotton, in shades of red, blue, yellow, green and brown. India, 17th century; from the Ashburnham Place Sale. Purchased, Au Panier Fleuri Fund. Detail shown, 34¾″ by 61″.

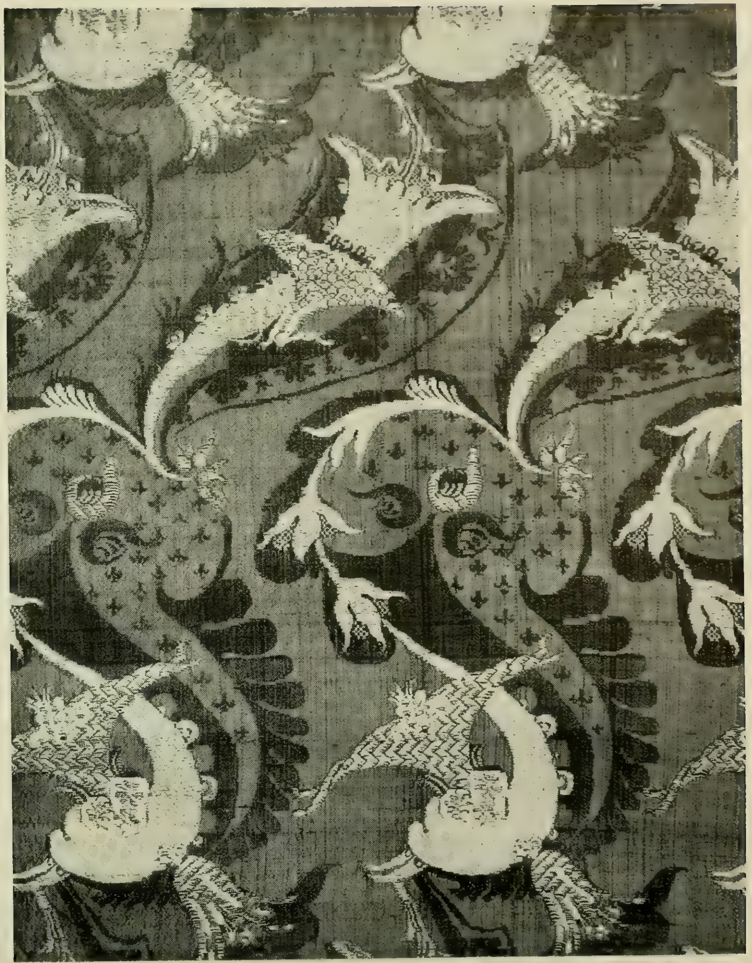


Fig. 21. Fancy satin; crimson, brocaded in silver, gold and blue. Italy (?), early 18th century. Given by J. Pierpont Morgan from the Vives y Escudero Collection. Detail shown, 13¾″ by 18¾″.

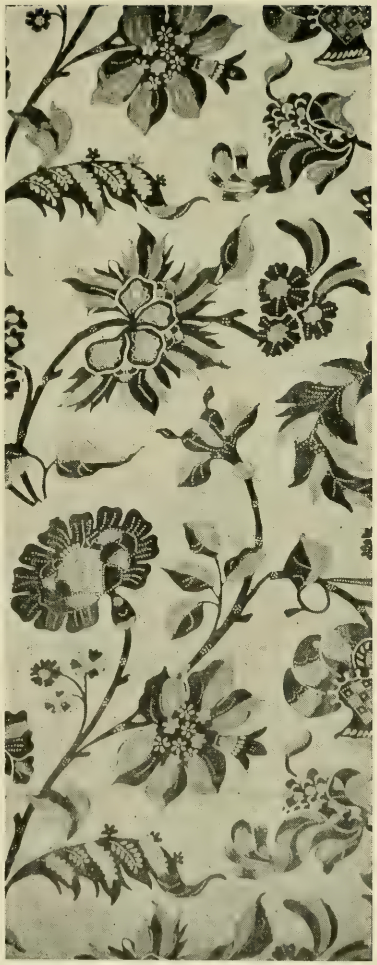


Fig. 22. Resist-printed cotton, blue on white. United States, first half of 18th century. Given by Mrs. Harry Horton Benkard. W. 18"; L. 41".

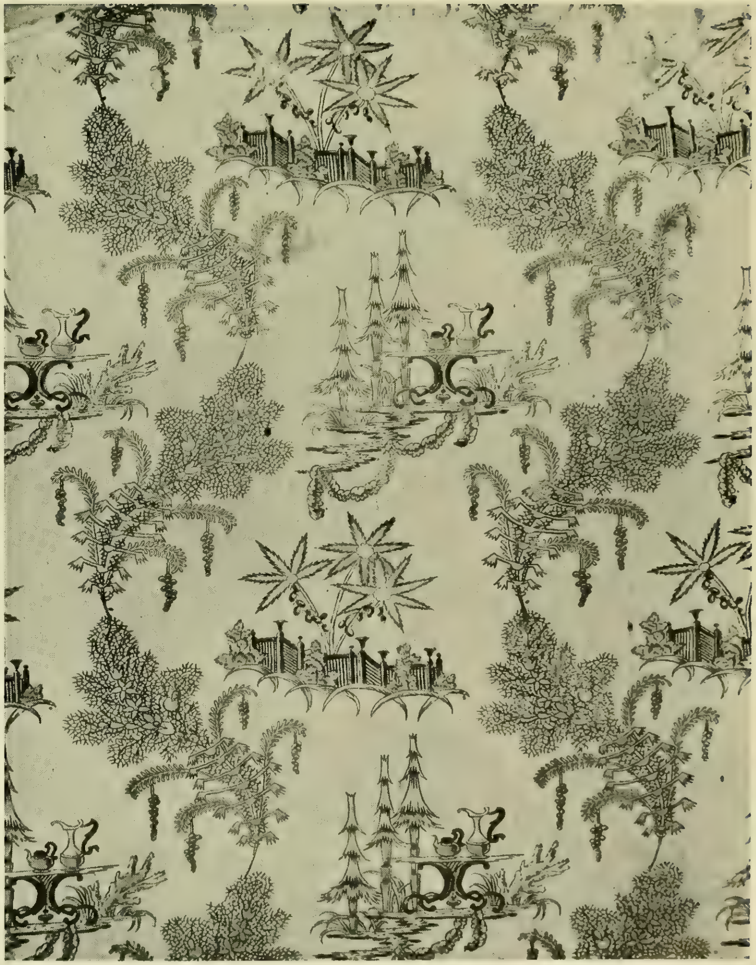


Fig. 23. Cotton, block printed in colors, Chinoiserie design. France, 18th century. Purchased in memory of Agnes M. O'Donnell. Length of repeat, 14½".

it is so familiar, so much a part of our everyday life, that we forget its enormous importance in our history, which it retains today.

Now all this transport of textiles about the known world throughout time continued not alone because, as with so much tin or coal, their purveyors were sure of a market. It was because in their age someone liked them, because of their beauty, either of pattern or construction, that they were sought. Records of silk ordered from the Near East for the popes of Rome in the 8th and 9th centuries are detailed as to colors and patterns — leopards, peacocks, griffons, elephants, and so on. "Fecit . . . vestem de fundato unam, habentem historiam aquilarum." "Fecit vestes . . . duas de tyrio . . . cum historia de elephantis."[24] Presumably these silks were admired, for not only were they employed in ritual, but rulers sent them as gifts, great prelates of the Church were buried in them.

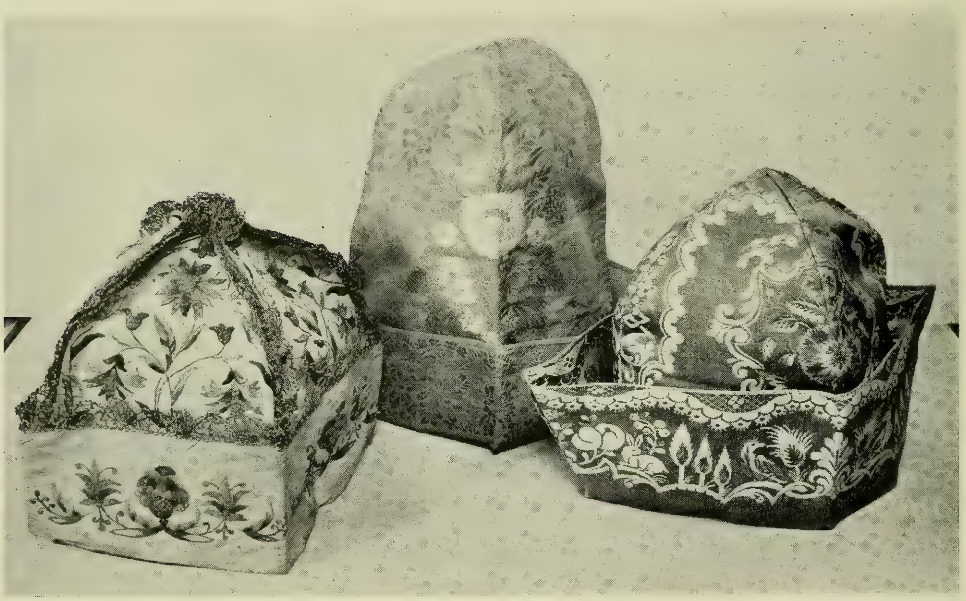


Fig. 24. Men's silk caps; embroidered (left) and woven in colors and metal. France or Italy, 18th century. Given by Richard C. Greenleaf. Approximate sizes, W. 7"; H. 7-9".

To the rich Burgundians the Italian silks of the 14th and 15th century were above all admirable; the velvets appear in paintings and miniatures; their patterns are plain to see in the tapestries. The quality of Florentine

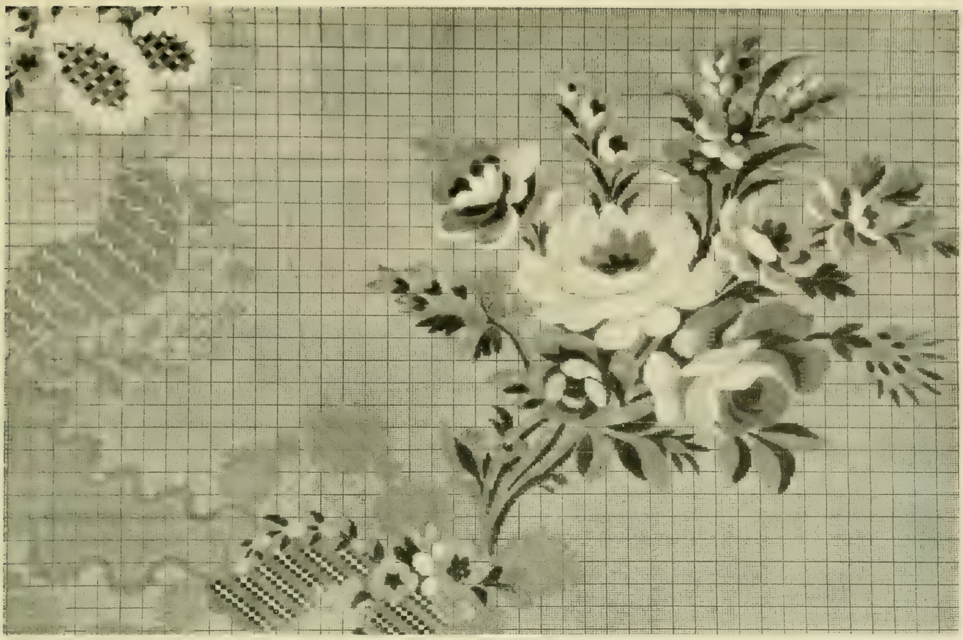


Fig. 25. Mise-en-carte for a woven silk, painted in tempera on squared paper in shades of red, rose, blue, green, orange and brown, with white accents. France, third quarter of the 18th century. Given by Miss Josephine Howell. Detail shown, 18⅝″ by 11¾″.

wools must have been pleasing to dwellers in Greece, Egypt, and Syria if in 1420 sixteen thousand pieces were exported for distribution in the Near East. The Indian painted cottons, first imported into Europe in the 17th century, because of their rich strange designs created a furore of demand. The arts of China, rediscovered by Europe in the 17th century, had by the 18th century penetrated and influenced every form of decorative art, and in textiles produced not only the familiar "chinoiserie" but, combining with the rococo movement, had for a time a freeing, enlivening influence on textile patterns.

As the textiles have moved about the world, so have their techniques and patterns moved with them, have entered into the art of other lands, have passed on from generation to generation.

"Mark my trail" shouted Mowgli to Rann the Kite high above him, as the "banderlog" bore him captive through the tree tops. Frequently one may mark the trail of some captured element of decoration, as when only yesterday my eye was transfixed by the broad band of ornament crossing the shirt on the grocery clerk's massive chest, for there were the familiar confronted stags, on either side of the stylized tree, straight out of the 16th-century Perugia blue-and-white towel borders. Two summers since appeared in our city a pretty printed silk dress whose design you may find in one of our 14th century Hispano-Moresque silks. Adaptation, transmutation proceed, which, if there are archeologists in the future, will surely puzzle them. For mark the trail of such translation as this: one company we know finds a design here, or elsewhere, reworks it in some way suitable to the ultimate consumer's taste, sends it to Japan to be printed, and markets it in the Congo. Art historians of the future – take note!

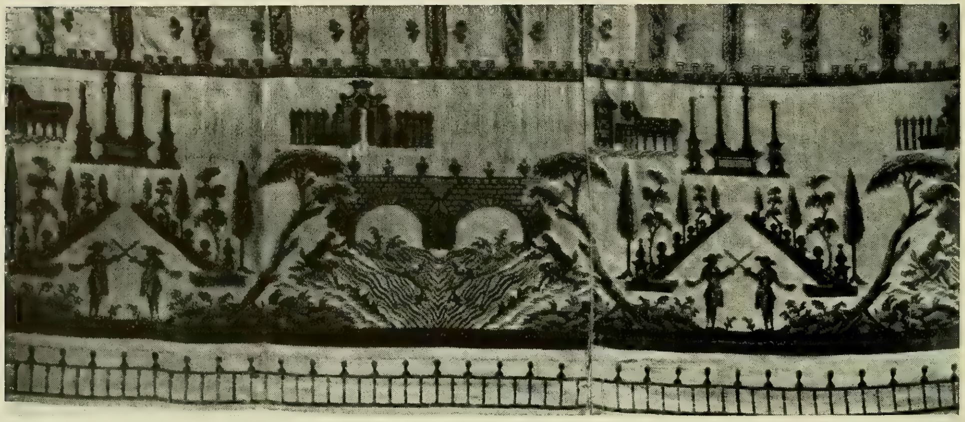


Fig. 26. Black cut and uncut velvet on satin. Detail from skirt border. Spain, late 18th-early 19th century. Given by Richard C. Greenleaf. Detail shown, 53¼" by 13".

The use of our collection, however, is not limited to the mere copying or reworking of textile designs. It is true that its resources are endlessly used by manufacturers and designers. We cannot follow to their final appearance the hundreds of sketches made here, from silk or cotton of India, from the embroidered pattern on an 18th-century waistcoat; from the needlepoint lace tassel of a 16th-century apron, or from the pages of our sample books which often are the final source of patterns for anything from challis to a "geometric" for decorative linens of modern design.

The public's conception of the museum curator as the remote dweller in an ivory tower is not borne out by the experience of this department; to this chronicler at least it appears that in a museum it is the unexpected that always happens. It may be the arrival of a visitor from Japan, bearer of a

Fulbright fellowship, whose search is for Eastern influence in Western art. Perhaps a hand weaver from California comes to examine not only examples of contemporary craft, but the skills of ancient Peru. A decorator dealing with the restoration of an 18th-century house may appear for suggestions of materials. A graduate student working on his thesis may require any group of materials from the Coptic weavings of Egypt to the printed cottons of 18th-century France. All of these problems are illuminating to our own work, as are the visits from staff members of other museums, whose research may be on anything from primitive weaves to the design of 19th-century textiles.

Sessions with groups from schools and colleges are as interesting to us as we hope they are rewarding to the students. The reaction of the adult classes to materials shown is not only gratifying in their appreciation of the beauty exhibited, but also illuminating, as an indication of contemporary taste.

The response of younger folk of junior high school age is not without its surprises, as when a group of girls brought in to see fine embroidery, by chance catches sight of a terrifying example of "Berlin wool work" — that elaboration of Victorian decadence in embroidery — and freezes us with exclamations of delight. This episode moves us to such mental clichés as "One man's meat is another man's poison," or "Beauty is in the eye of the beholder." But indeed it confirms our belief that more and better examples of first-rate material should be seen by the young.

The steady extensive use of this collection is proof of its need and importance; and the citing of these few instances from the experience of this writer during the past half year seems in fact unnecessary to any lover of decorative arts, for to such a one the textiles speak for themselves.

Perhaps in our seriousness, our concern with education through the use of the museum objects, or perhaps from some last remains of a Puritan heritage, we tend to forget that aesthetic enjoyment of an object is not a sin, and that, put positively, the provision of such opportunity for pleasure is a function of a museum. Many people — and this writer admits to being one — enjoy looking at paintings or their affiliates, drawings and prints. Many people derive as much pleasure from the observation of a beautifully designed textile, as in gazing at much of the "yard goods" exhibited as painting today. (Let me hastily add that I am indebted to a contemporary painter for the quoted phrase.)

An added pleasure of perception is possible through an exercise of the imagination, which to be sure often depends on information. We forget that these textiles in their employment often had motion, either on the person of the wearer, or in long folds swaying at door or window. We tend to treat them as flat design. Indeed the Museum contributes to this impres-

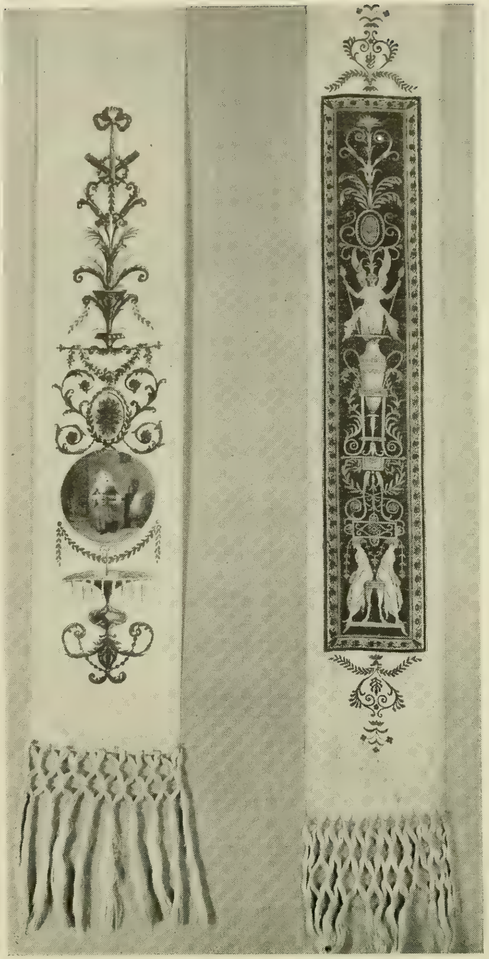
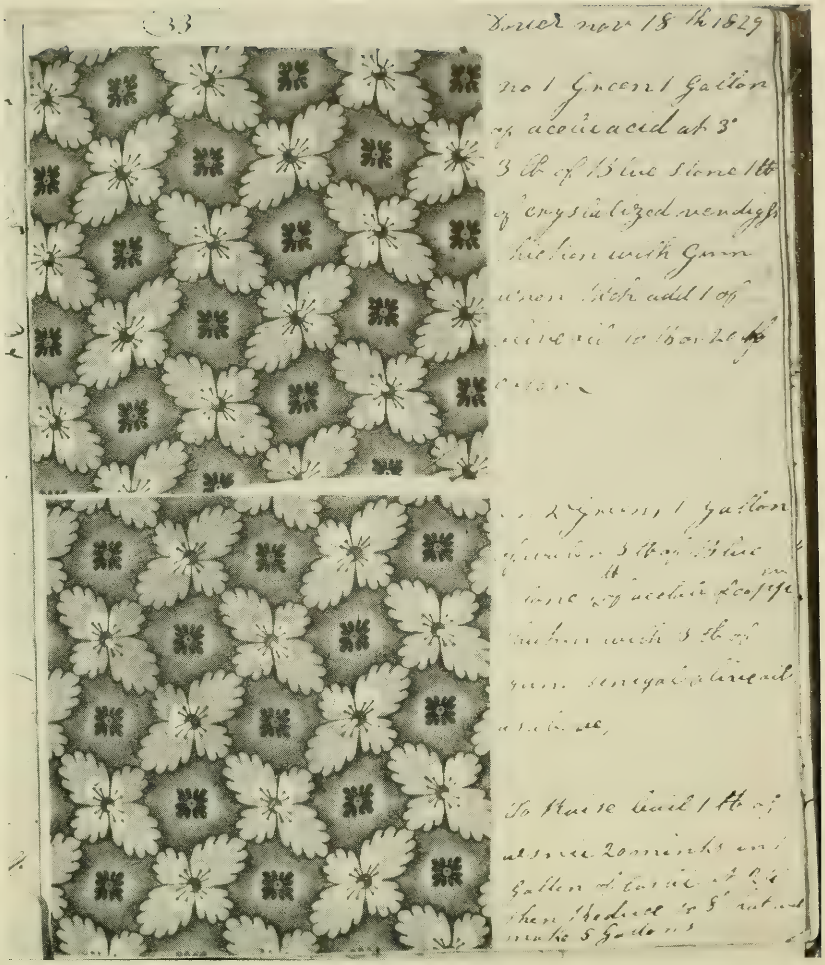


Fig. 27. Satin sashes with printed decoration; left, in black, given by Mr. and Mrs. De Witt Clinton Cohen; right, in colors, given by J. Pierpont Morgan. France, end of 18th century. Details shown, approximately 4" by 26".



33

[illegible] nov 18th 1829

no 1 Green 1 Gallon
of aceticacid at 3°
3 lb of Blue Stone 1lb
of crystalized verdigris
[illegible] with Gum
[illegible] add 1 oz
[illegible]
[illegible]

no 2 Green 1 gallon
[illegible] 3 lbs of Blue
[illegible]
[illegible] with 3 lb of
gum senegal [illegible]
[illegible]

To these [illegible] 1 lb of
[illegible] 20 minits [illegible]
Gallon [illegible]
then [illegible] 5 [illegible]
make 5 Gallons

Fig. 28. Page from printer's sample book dated 1829. Inscribed in cover: *Blackford Bridge near Bury, Spt 7, Edmund Barns;* and again at back, *Edmund Barnes, Providence.* Purchased in memory of Jacques Seligmann. Page, 6½" by 8".

sion when we mount them flat under protecting glass or in study mounts under plastic. This we must do, of necessity, for defense against dirt, for preservation. They thus take on for many the aspect of so many specimens, unrelated to any use.

It is easy enough to conjure the image of full billowing robe from the richly flowered length of Louis XV silk; for silk of all materials suggests movement. The large patterned velvets may be made familiar through painting. The medieval fragments compel more exercise of imagination; but occasionally our records provide us with a stimulating picture. One minute fragment which, if you pause to glance at it, should please you by the perfection of its intricate design, was we know once part of the vestment worn by a bishop of 13th-century Spain and might be figured moving in ritual under the stone arches of a Spanish cathedral.

Selection of photographs for illustration of the present account has been conditioned by certain considerations; many have appeared in other publications as well as past numbers of the *Chronicle.* For this reason the group of Hispano-Moresque silks, one of our most interesting, receives only reference in the text. Illustrations of our Indian textiles have also been made available in previous issues.[25]

Color and clarity have limited us, for many of the earliest silks are now so delicate that the camera cannot capture what the eye perceives. So in Fig. 8 you must imagine the soft rose and green and silver through which the phoenix — favorite bird of Lucca's silks — flutters, challenging the glance of the swimming swan.

Finally came consideration of the type of textile to show: the most famous? rare? earliest? It is a basis often used, but which in fact gives little indication of the full resources of a collection. The early and rare indeed have their historic value; their association is essential to the study of other arts of their time. But it is not always the grandest, the rarest, which is of the greatest assistance to the user of the collection. The weaver may be equally interested in some two-inch scrap from Coptic Egypt and in a coverlet fragment from 19th-century America. The tracer of pattern sources may work from fragments of 16th-century cutwork to the same design in present-day Mexico.

And what, by the way, is rarity? Time and destruction have produced this condition. Wool, one of the commonest textiles throughout history, disappears through activity of the moth, so that woolen fabrics of a period even as close as the 18th century, which hung windows, covered chairs of our Colonial forbears, is now "rare." And this writer would admire to see a piece of 15th-century Florentine wool. It might be very plain!

The anonymity of textile design throughout centuries renders the art none the less important. It is known that Jacopo Bellini designed elaborately for 15th-century Venetian silks; here and there the names of embroidery designers are recorded, such as Geri Lapi of Florence, whose signed altar frontal is at Manresa, near Barcelona, and Marcos de Covarrubias, 16th-century master embroiderer in Toledo Cathedral.[26] In nearer times we know the names of many 18th-century artists — Huet for cottons printed at Jouy, Philippe de la Salle for silks of Lyon, to name the two most familiar; but what of the nameless thousands of artist-craftsmen whose skill, inherited, or harshly learned as a child apprentice, has left for us such a bequest of beauty as flows through centuries of their work, preserved for us by chance, by funerary or church rite, or by the collector's care? If we could assign them titles, such as those given minor painters, as The Master of the Swimming Swan of Lucca or Master of the Rampant Lion of Almería, would it render more important the work they have left us?

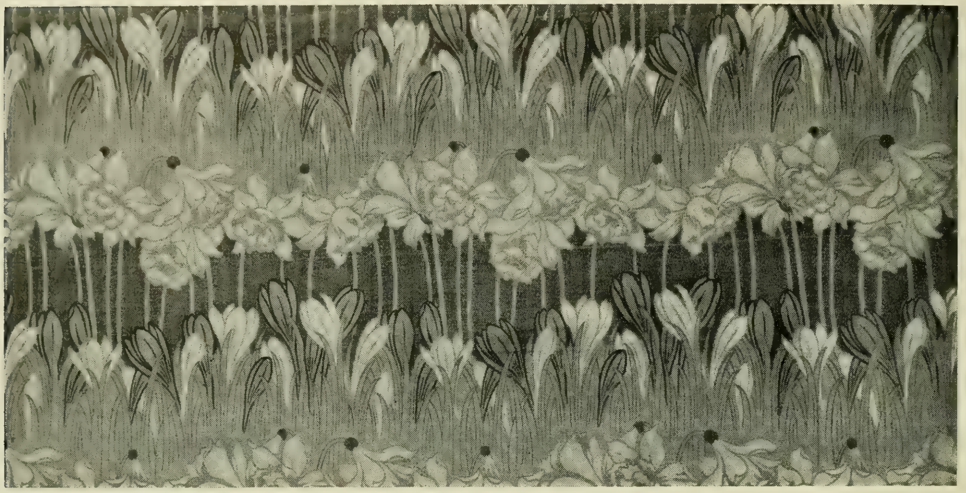


Fig. 29. Crocus and Daffodils. Cotton roller-printed on both sides in brown, yellow and red. Designed by Arthur Wilcock and printed in England about 1890. Given by Mr. and Mrs. G. Glen Gould. Detail shown, 26⅜" by 13¾".

The importance of a textile is in its communicable beauty, and this we may perceive in the intricate interlace of a tapestry-woven fragment made for the shirt of some nameless dweller in the Nile valley; in the flowing line of the arabesque which surrounds the main element of an Hispano-Moresque silk, appears years later in border designs of Italian embroidery; in the many agile, imaginative small patterns of silk, dress velvets and their imitations in humbler combinations of material from the 16th and 17th century; in the grace of 18th-century flower patterns, not only in the silks but in the simple printed cottons of household use and daily wear.

Even in so casual a backward glance over a thousand years of textile patterns, we cannot escape noting certain interesting features: the emergence and persistence of certain forms, such as the eight-pointed star which frames the cock in the Byzantine silk (Fig. 3); and again the rampant Spanish lion in the 16th-century wool (Fig. 10); the gradual disappearance of the Sasanid roundel; the fresh nervous animation of the 14th-century Italian silks; the return to the "tranquil balance of symmetry" during the Renaissance[27] and the gradual appearance of so many charming plant forms and their handling by various races in various epochs.

Above all we observe the animals and birds, fantastic, severe, gay. In the earliest textiles they appear in their round frames with a kind of noble savagery; later they race, they run, how they run! through the borders of the Coptic stuffs; they perch, they swoop, they confront each other fiercely; they elude the hunter in 16th-century embroidery and are still eluding him in 18th-century lace.

All this concern with the fauna and flora in the world around them, so delightfully expressed in the past, presents a contrast to much contemporary design and makes one wonder whether the growth of cities and life indoors produces patterns based on the cafés of Paris, the monuments of Florence, or paving stones which may well be the sidewalks of New York. Should this be the case, it would but instance once again the reflection of life by art.

Earlier in these pages it was suggested that the study of textiles was valuable to an understanding of the artistic and cultural history of the time of their production. Quite aside from the similarity of design in different media to which ample reference exists in the matter of sculpture, wood carving, ivories, a far more revealing examination to pursue would be the tracing of sources of design in the combination of economic, social, and religious forces of an epoch. What, for example, in the Arabic culture produced the intricate yet controlled geometrical forms which were, to quote Grousset, not only a delight to the eye but to the intelligence?[28]

Why in the mid-18th century are the opposing curves of the rococo, the waving branches of floral decoration, straightened; why do the legs of chairs assume the form of delicate Roman pillars? The long war of taste in the 18th century between the classicists and romantics — in which the lovers of the Classic Revival won out — derives, as everyone knows, from forces deep in history, from archeology, literature of the time, awareness of nature, influence of the Far East and in fact a complex of influences, of which the textiles of the century hint in their infinite changing patterns.

We are today in the midst of another war of taste between the "modernists," so called, and a variety of loosely assorted groups, who rely on traditional design, but may express their predilections in many ways, from a love of New England pine furniture, to the decoration of something vaguely called "French Provincial" – with a little German porcelain for added interest.

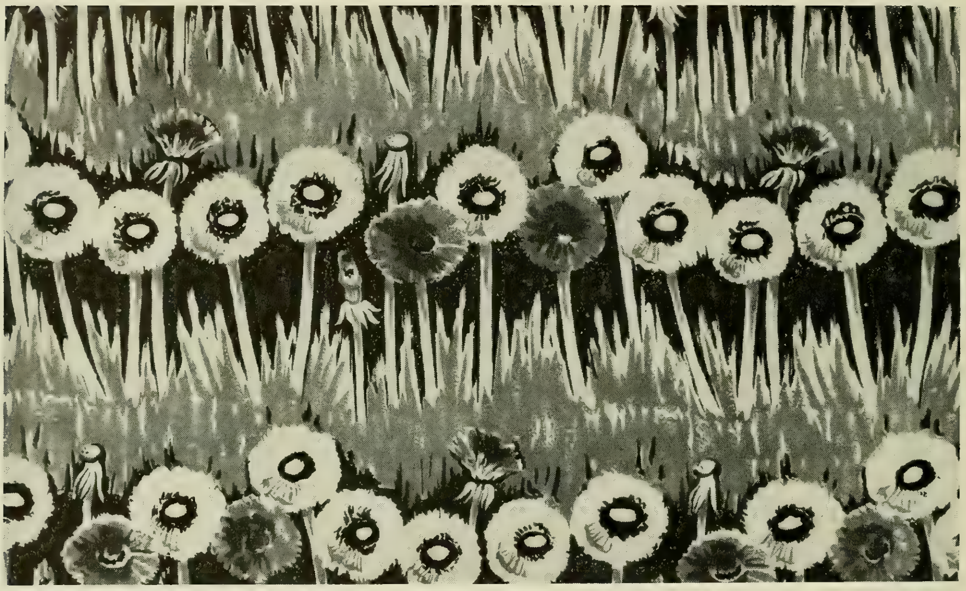


Fig. 30. Dandelions. Cotton screen-printed in black, grays, light brown on white, and glazed. Cheney Brothers, United States, 1951. Purchased in memory of Miss Eleanor Blodgett. Detail shown, 33″ by 17″.

The swing toward simplicity of the modern movement has undoubtedly removed a lot of fuss and dust. Yet in what sometimes appears an effort to deracinate their work from any obligation to the past so much has been removed as often to produce effects either sterile or bizarre.

Surely it is obvious that the roots of modern design are not discovered alone in the works of the Messrs. Gropius, Wright, Le Corbusier, and their followers, but derive from as great an involvement of forces – social, economic, technological – as complex historically as those from which grew the conflicts of taste in the 13th, 15th, or 18th centuries.

Even within the ranks of the modernists one discerns a change – a glance backward. Let me paraphrase the words of one, an architect, who, a year ago, addressing the Graduate School of Design at Harvard, stated that whereas in the architectural revolution of some thirty years ago aesthetics and history were ignored, "techniques and functionalism seemed all-inclusive, today we realize that functional form alone does not necessarily produce beauty" — which he allowed was a spiritual necessity of man. He regretted the lack of "training in the history of the visual arts," and ended by emphasizing the necessity for "continuity between the past, the present, and the future." [29]

The function or functions performed by such a textile collection as that of the Cooper Union Museum are many, only a few of which have been suggested in these pages. The collection, we are well aware, must be strengthened in certain categories; it must grow to meet the need for continuity not only with the past but with the future, of which Mr. Sert spoke.

A museum must take the long view, must plan its growth patiently and carefully; must interpret its work, its services to the public; must gather friends to interpret it. And if to some of these it may occasionally seem that the long view is the retarded view, it should be remembered that to many of us long in the field has been given a vantage point from which to watch the shifting tides of taste, while learning at the same time to recognize the firmly-set markers of man's artistic progress.

ALICE BALDWIN BEER

NOTES

[1] Aldous Leonard Huxley. Brave New World. New York and London, Harper and Brothers, 1932.

[2] Francis Henry Taylor. Babel's Tower; the Dilemma of the Modern Museum. New York, Columbia University Press, 1945, p. 26.

[3] The collectors:

D. Antonio Vives y Escudero, 1859-1925. Archeologist, numismatist, arabist, professor of the Special School of Arabic Studies of the Ateneo of Madrid. Among his many writings one, Monedas De Las Dinastias Arábigo Espanolas, was highly considered. An extensive biographical sketch is published in Enciclopedia Universal Illustrada Europeo-Americana. Tomo 69.

D. Francisco Miquel y Badía, 1810-1899. Member of the Academy of Fine Arts, and Professor of Theory and History of Industrial Arts, of Barcelona; contributor of articles on decoration to the Diario, Barcelona; writer on various phases of Spanish art history. For the series Historia General de Arte, published Barcelona, 1897, he wrote the chapters on the history of furniture and on textiles, embroideries and tapestries which appear in Vol. 8. His house was a veritable museum and his collection of textiles well known to foreign specialists. The foregoing, and additional information about Miquel y Badía, appears in: José Pasco, Catalogue of Textiles of D. Francisco Miquel y Badía, Barcelona, 1900.

Concerning Stanislas Baron the Museum has at this writing no information.

[4] Textiles from the Morgan Collection have been studied and published in many places. Probably the earliest of such publications was that by the late R. Meyer-Riefstahl: Early Textiles in the Cooper Union Collection, *Art in America,* August, October, and December, 1915.

[5] Eleanor G. Hewitt. The Making of a Modern Museum. Written for the Wednesday Afternoon Club. Read February 5, 1919.

[6] Edith Wharton and Ogden Codman. The Decoration of Houses. New York, Scribners, 1897.

[7] Percy Lubbock. Portrait of Edith Wharton. New York, B. Appleton-Century Co., 1947.

[8] Lace from the Cooper Union Museum Collection has been published in the following numbers of the *Chronicle of the Museum for the Arts of Decoration of the Cooper Union:* Vol. 1, No. 6, April 1940. Laces in the Museum's Collections, and The Lace Study Collection, both by Elizabeth Haynes. Vol. 1, No. 11, December 1945. Comparisons in Lace Designs, by Marian Hague.

[9] See *Chronicle,* Vol. 2, No. 6, June 1954, p. 185, for illustration of a fine Point de France lace from this gift, and present issue, Fig. 17.

[10] Illustrated, *Chronicle,* Vol. 2, No. 6, June 1954, p. 183.

[11] Illustrated, Fig. 20, and *Chronicle,* Vol. 2, No. 6, June 1954, p. 184. Of the set of six, two were acquired by the Victoria and Albert Museum, London, four came to this country and were offered for sale to the Cooper Union Museum. We shared our purchase with the Museum of Fine Arts, Boston, each museum acquiring an example of the two techniques represented. Miss Gertrude Townsend, in the *Bulletin of the Museum of Fine Arts, Boston* for December 1954, has published the two acquired by that museum in an article, Painted Cottons and Embroideries. For an earlier study of these hangings see: *Journal of the Indian Society of Oriental Art,* Vol. 17, 1949, article, The Commercial Embroidery of Gujerat in the Seventeenth Century, by John Irwin; and most recently, by the same writer, Origins of the 'Oriental Style' in English Decorative Art, in *The Burlington Magazine,* Vol. XCVII, April 1955, p. 106-114.

[12] Frances Morris. Exhibition of Printed Fabrics, with Original Cartoons and Designs. *Chronicle,* Vol. 1, No. 1, 1934-1935, p. 4-11.

[13] Wilhelm von Heyd. Histoire du Commerce du Levant au moyen-âge. Edition française, refondue et considerablement augmentée par l'auteur; 2 Vols. Leipzig, 1923. Vol. 1, p. 49. Vol. 2, p. 670.

Otto von Falke. Decorative Silks; third edition. New York, Helburn, 1936, p. 22.

[14] Heyd, Vol. 2, p. 707.

[15] Francis Henry Taylor. The Taste of Angels. Boston, Little Brown and Co., 1948; p. 41.

[16] Heyd, Vol. 2, p. 248-249.

[17] Heyd, Vol. 2, p. 252.

[18] Falke, p. 34 and following.

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[22] Eileen Power. Medieval People. New York, Doubleday Anchor Books, 1954.

[23] Samuel Eliot Morison. Maritime History of Massachusetts. Boston, Houghton Mifflin, 1921, pp. 79-89.

[24] Michel, Vol. 1, pp. 16-17: "He made . . . one garment of cloth interwoven with gold, bearing a design of eagles." "He made . . . two garments of purple . . . with a design of elephants." Michel, while commenting upon the uncertain meaning of *fundatum,* inclines (p. 8) to the belief that the word refers to a precious fabric into which gold thread was woven.

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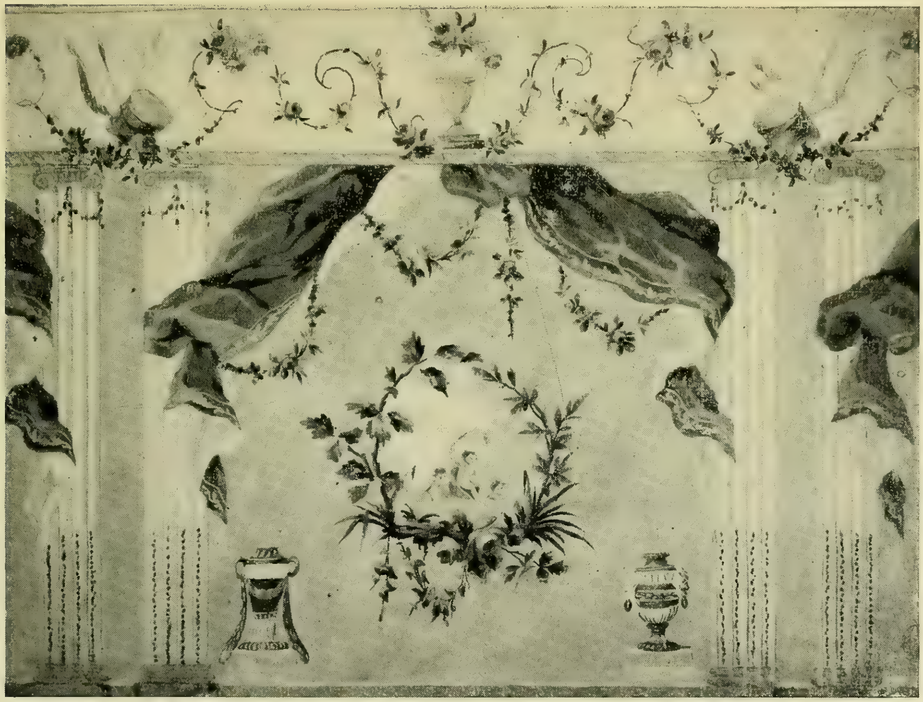

Design for a woven wall-covering. Pencil and colored gouaches. Artist unknown. France, probably Lyons, about 1780. Given by the Misses Hewitt, 1920.

VOL · 2 · NO · 8 JUNE · 1956

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CHRONICLE OF THE MUSEUM
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Some Observations on Textile Designs in the Cooper Union Museum

CONCERNING DRAWINGS, Vasari makes the observation that the art of drawing is a spiritual process in the creation of a work of art which evolves out of the interplay of intellect and observation – in other words, of spirit and nature.[1] A drawing originates in the intellect in the form of an idea, a conceptual image externalized by application of it to a form of nature. It is therefore the mutual abstraction, combined with observation, which coalesce in the creation of a drawing. This fact holds true with the designs for textiles: that the same general mental process of creation, though ever changing, is followed as in drawings of other categories.

Throughout the various periods of art history, the names of a few great artists, who are known to have designed textiles, have come down to us, but the fame of these men seems to be based, rather, on their work in or for other media of expression. We know, for instance, of textile designs by Jacopo Bellini (active in Venice from 1400 to 1470),[2] by the painter and sculptor of Verona, Pisanello (1380-1456),[3] by the Florentine, Antonio Pollaiuolo (1426-1498),[4] as well as by other artists of the Italian Quattrocento.[5] But the lasting fame of these men rests with their other drawings, their painted, engraved or sculptured works, rather than with their designs for textiles.

Other than those for tapestries,[6] textile designing did not emerge as a highly specialized art of its own in Western Europe until the 18th century, and then chiefly in France.[7] But even in a period so comparatively recent, only a few names seem to have come down to us in this connection, with Philippe de Lasalle (1723-1805), Jean Pillement (1728-1808), Jean-Baptiste Huet (1745-1811) and Jean-François Bony (1754-1825) as the most famous of

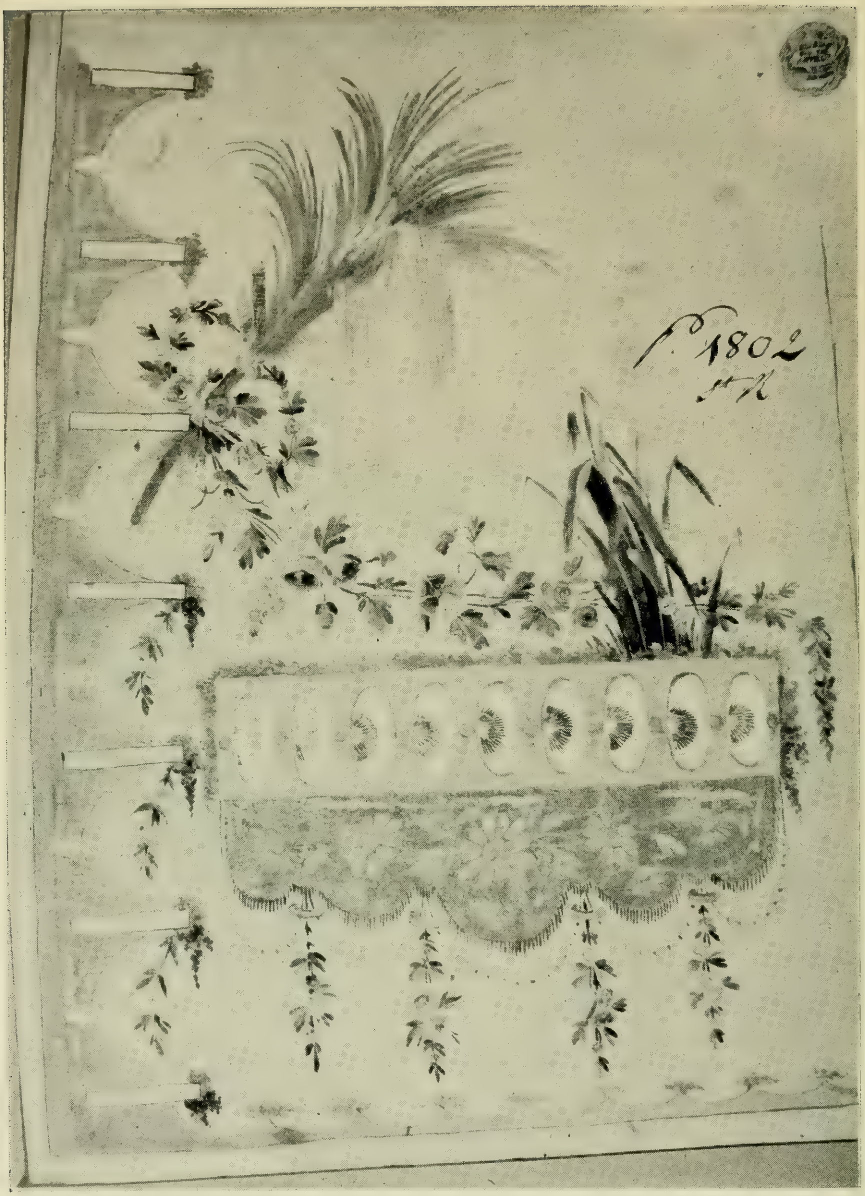


Figure 1. Project for the left side of a man's *gilet*. Pencil, pen and ink, with colored gouaches. By Mademoiselle Montalon (from the Fabrique de St. Ruf). France, probably Lyons, about 1785. Given by the Misses Hewitt, 1920.

these. This anonymity, generally speaking, is not so much due to the fact that textile designers were inferior artists, but that their craft, a highly specialized one, was limited by the complete dependence upon and subordination to the manufactory under which they worked. Thus it became the house name with which we are more apt to associate a given textile and its design, than that of its creator. This inconspicuousness on the part of the designer persists to this day. Following the traditional pattern, a few names stand out in modern textile design, perhaps the most famous being Henri Matisse and Jean Lurçat, who will go down in history as designers, though, once again, not necessarily for textiles.

Though the Cooper Union Museum possesses an outstanding collection of nearly two thousand textile drawings of many different categories, dating from the 18th century to the present day, it does not own any earlier ones. This is not a circumstance of particular embarrassment, however, considering the relative paucity of such material prior to this period. The collection comprises designs for embroidered and brocaded silks, for carpets and other woven stuffs, such as shawls, and for printed cottons and silks. In some cases the purpose for which the designs were intended is obvious, but in others, we cannot safely decide whether they were destined for woven or embroidered fabrics, and their ultimate purpose, either for dress or for household decoration, remains a mystery. The general bibliography that exists on the subject of these later textiles and their design is so slight and misleading, except in one or two special categories, that one must rely on the eye alone, and follow with great caution a tortuous and at times vague path. One of the principal difficulties in this endeavor is placing the textiles themselves in their proper period, country and locale; the ability to give them to a known artist is almost always the result of mere chance.

We begin our study by just so fortunate a coincidence, for in the collection is a large block of a variety of designs for embroidery, many of unusually high quality, which in number come to upwards of three hundred, for gentlemen's *vestes* (or waistcoats) and *gilets* (abbreviated waistcoats), for ladies' overskirts and dress borders, and various other details intended as embellishments for wearing apparel. These drawings originated in a manufactory by the name of St. Ruf, whose sure identity remains unknown, but which most probably, because of stylistic similarity with other work of the region, was located in Lyons.[8] A positive clue to the existence of this factory is that many of the drawings have written upon them in ink, along with the pattern number, "S.R.", "St. R.", or "St. Ruf", and on the verso of one drawing (a project for the left-hand pocket of a *veste*), "La fabrique de St. Ruf — Riche en Dessin de tout genre." By mere chance, it has been found that in the Print Room of the Metropolitan Museum of Art is a pattern record book,[9]

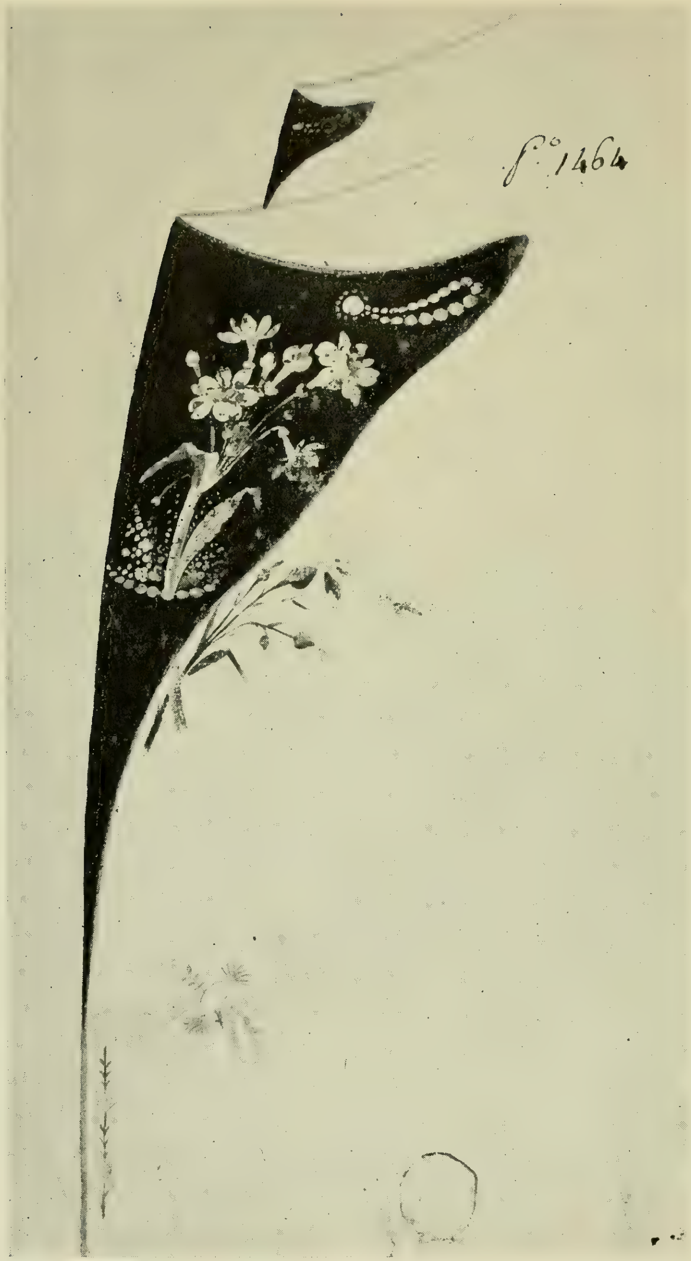


Figure 2. Project for the left lapel of a man's *veste*. Pencil and colored gouaches. By Mademoiselle Montalon (from the Fabrique de St. Ruf). France, probably Lyons, about 1785. Given by the Misses Hewitt, 1920.

coming from this same factory, which contains many patterns, sketched in with ink, whose numbering corresponds with that found in our drawings, and, as well, the names of the artists who conceived them. In some instances have been inserted the names of the embroiderers (always women), the prices received for their work, the patron for whom the finished product was intended, and, in one instance, the date (30 November 1785) of completion of the work. Of the designs found in this record book, 128 are for waistcoats, 158 for buttonholes, 103 for waistcoat or dress borders, 40 for fields, 17 for waistcoat lapels and 12 for skirt borders. In a few cases the use of the motif cannot be determined. The numbering of these patterns runs from 1437 to 1920, with some oddities in the numbering.

But the drawings in the Museum's collection cover a far wider numerical range, and the possibility of identifying them rests only with those corresponding patterns which appear with the designers' names in the record book. Perhaps all of these designers were women, but *"Mlle"* appears only occasionally, and then with but three different names. On leafing through this valuable source material, one notices that certain artists were, more or less, specialists in a particular design: one preferred doing waistcoat pockets, another buttonholes, and still another, exotic birds. It is unfortunate that no clue seems to exist which might hint at the provenance of these drawings. They were purchased in Paris by the Misses Hewitt, the Museum's founders, who presented them over the years, 1920 to 1925, along with many other textile drawings unrelated to this group.

A particularly brilliant drawing in this lot is the project for the left side of a man's *gilet* (Fig. 1). In French dress of the late 18th century, the *gilet* can always be distinguished from the *veste* by its straight, rectangular front, cut at right angles along the bottom, as well as by the pocket, minus the flap, but featuring, instead, an elaborately embroidered welt. The creator of this *gilet* design is a certain Mademoiselle Montalon,[10] one of the most productive and artistically distinguished designers of the group, whose specialty seems to have been waistcoat designs. She has cleverly conceived the welt as a flower box, from which sprouts a clump of meadow grass. Entwined about a palm frond in the upper part of the field is a runner of rose brambles, which also mingles among the grasses. From this "box" hangs a lavender lambrequin, strewn with daisies, from whose fringed border are suspended, in turn, clusters of little flowers. The outer edges of the garment are also set off with matching fringed lavender, and each buttonhole is accented by little vines and blossoms. Here, then, is a most carefully thought-out design for an article of wearing apparel, which has been given a touch of lightness and fantasy without removing any of the elements of its apparent utility.

Also by Mademoiselle Montalon is the project for the lapel of a *veste* (Fig. 2). Set off against a black ground edged in gold (probably intended to be carried out in velvet), which suggests the lining of the garment folded over a lighter outside surface, is a small cluster of pink and white flowers, possibly tuberoses, with a spray of blue cornflowers projecting from beneath the flap, while the buttonholes are edged with simulated ropes of pearls. Here the artist has left the field relatively unadorned, so that the tailored features may be given greater prominence.

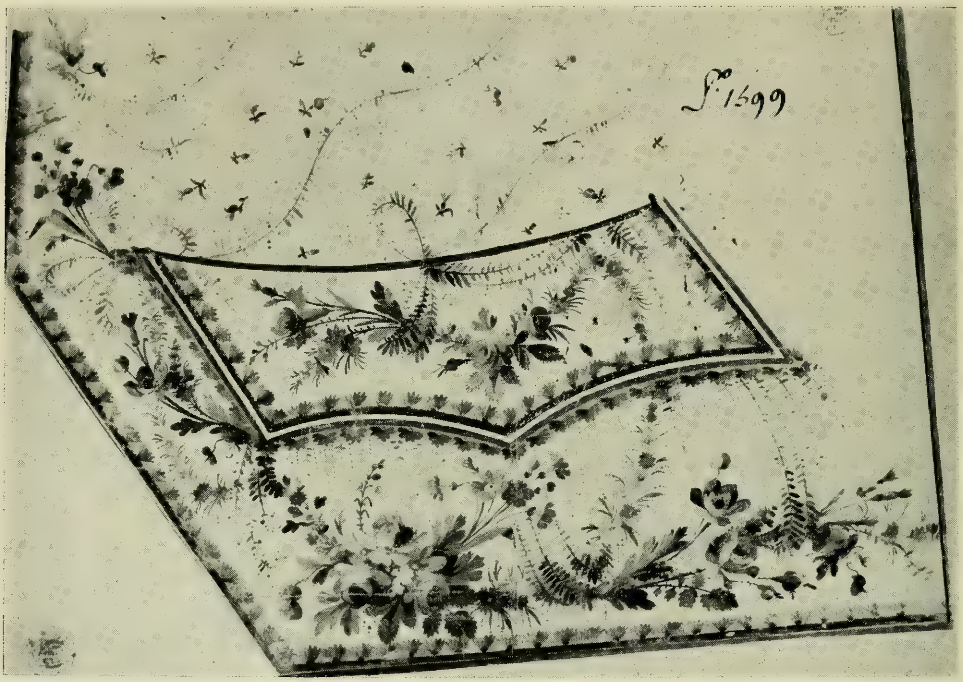


Figure 3. Project for the left lower corner of a man's *veste*. Colored gouaches. By Baulieu (from the Fabrique de St. Ruf). France, probably Lyons, about 1785. Given by the Misses Hewitt, 1921.

But it is the pockets and bottom edges of the *veste* which received the greatest amount of attention from the designer. One relatively complicated floral design, by the artist Baulieu, shows clusters of roses intermingling with little vines which loop here and there in a way to form occasional bows at the bases of the floral sprays (Fig. 3). With the natural bent for gardening traditionally attributed to the French, the ability to render flowers accurately came easily to these designers, though artistic imagination sometimes makes difficult the identification of botanical forms. And whether or not the flowers are readily recognizable, we have no trouble in observing from the designs the demands made by their smallness of detail and delicacy of execution upon the skill of the embroiderers who were destined to execute them. We do not know exactly how these colored drawings were translated into a finished garment, but it is thought that they might first have been re-drawn in ink on another sheet of paper, which was then pricked for pouncing. A few colored embroidery drawings in the Museum's collection have been pricked, but apparently not pounced. However, one drawing for the pocket of a veste, rendered in pen and ink, uncolored, is pricked, and charcoal smudges, the result of pouncing, are to be found on its reverse.[11]

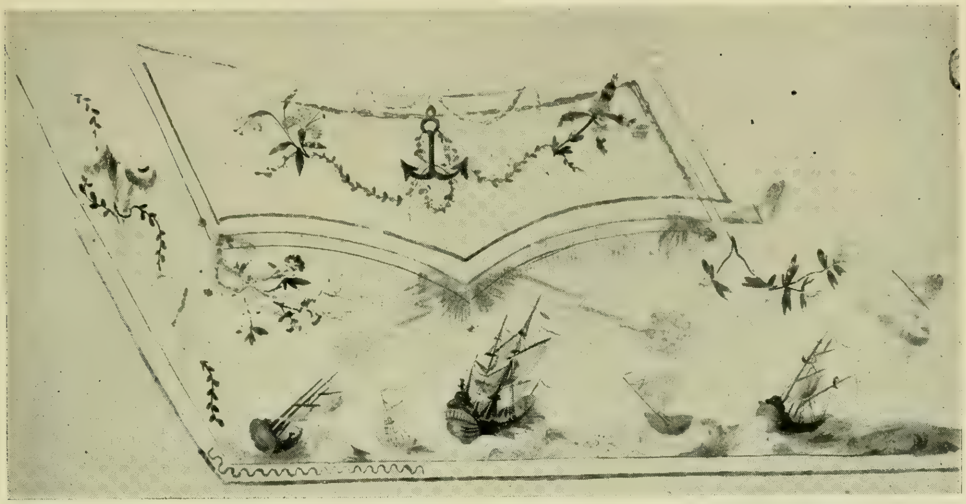


Figure 4. Project for the left lower corner of a man's *veste*. Pencil and colored gouaches. Artist unknown. France, probably Lyons, about 1785. Given by the Misses Hewitt, 1920.

The creative abilities of these artists were by no means confined to floral designs, for in the Museum's collection of over 140 projects for embroidered waistcoats, we find all sorts of other subjects: classical ruins, motifs in the "style chinois," animals, birds, the fables of La Fontaine, vegetables, as well as many other subjects. One project of some interest, though it may not have come from the Fabrique de St. Ruf, shows ships being tossed about on a rough sea with flashes of golden lightning striking from the heavens (Fig. 4). Though we might conclude that this *veste* was designed for a gentleman with

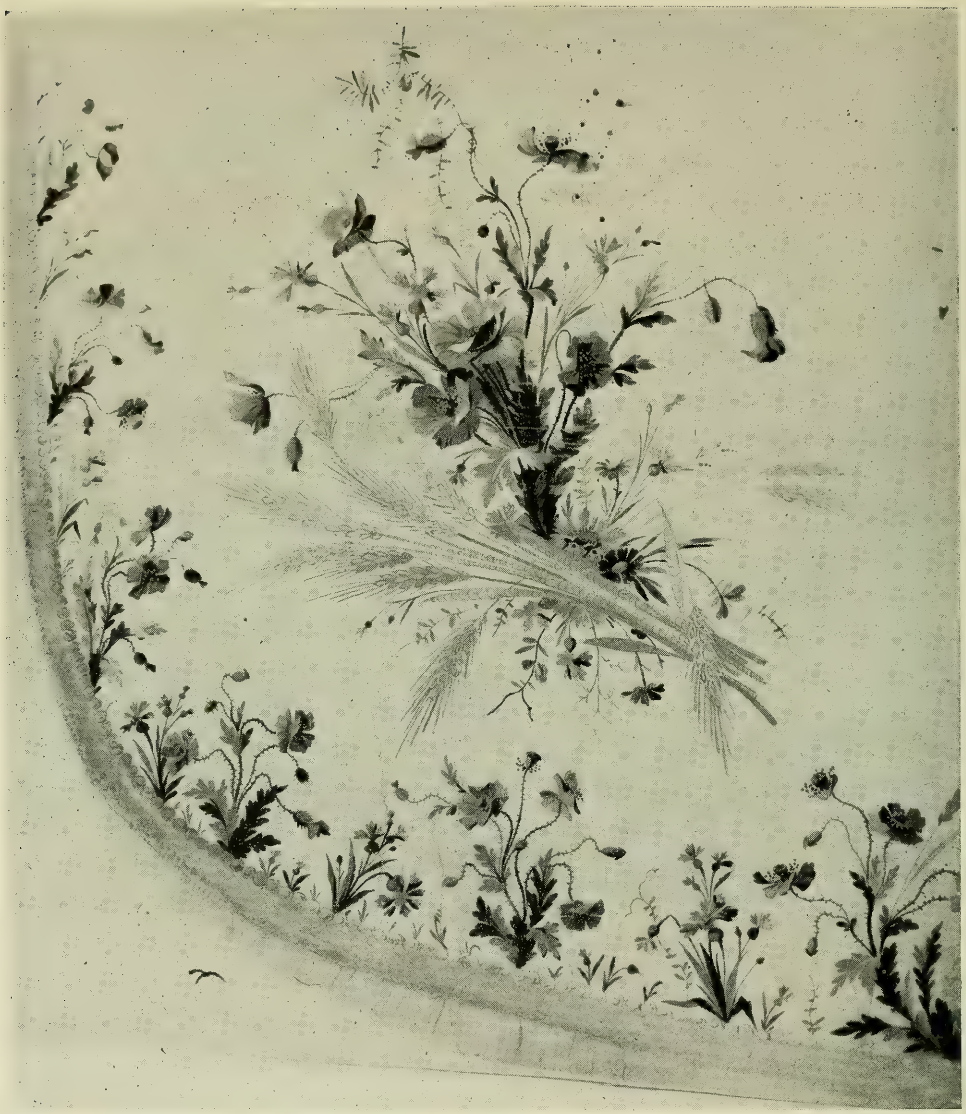


Figure 5. Project for the left lower part of the overskirt for *a robe à la française*. Pencil and colored gouaches. Artist unknown. France, probably Lyons, about 1785. Given by the Misses Hewitt, 1920.

a nautical turn of mind — such as an admiral — it could, as well, allude to the victory of Alexei Orlov over the Turks in the naval battle of Cheshme in the Aegean Sea, which took place July 7, 1770, and which was hailed in France as well as in Russia. Five years afterwards, Philippe de Lasalle designed a very important brocaded silk hanging, woven for Catherine of Russia by the firm of Pernon of Lyons, commemorating this event.[12] It is also of interest to note that the motif of an anchor forms part of the escutcheon of the Pernon family.[13] Even if this particular waistcoat design did not emanate from the house of Pernon, it illustrates the popularity elsewhere of nautical subjects in textile design, and, as seems always to be the case with such work as this, little flowers have been worked unobtrusively into the composition.

The production of waistcoats was not confined to Lyons, or even to France for that matter. In Krefeld, in western Germany, there was a very important factory, operated by the von der Leyens, a dynasty of Dutch textile manufacturers, who made a specialty of waistcoats, of the less expensive woven (that is, brocaded) type, rather than the far more costly embroidered ones. The Heimatmuseum at Krefeld preserves drawings for some of these.[14] But the brocading of waistcoats was also practiced in France, for the Metropolitan Museum of Art possesses a mise-en-carte (No. 27.104.3), coming from Lyons, for the pocket of a brocaded waistcoat, the drawing being rendered about twice the size of the intended finished product for the convenience of the weaver.

Turning to ladies' dress design, the 18th-century embroiderers concentrated their attention on the elaborate overskirts. But before discussing the designs themselves, mention must be made of certain peculiarities of late 18th-century French fashion. From early in the 1760's, women's dresses were made to part in a triangle above the waist, and over the loosely hanging pleated and ruffled skirt was another skirt, of simpler lines, though of richly embroidered or brocaded silk, made to spread out over the underskirt, and slightly gathered at the sides; this was known alternately as the *panier à la janséniste* or the *robe à la française*. The dress of the Louis XVI period (from about 1770 on), the *robe à la polonaise,* exemplified the reaction against this earlier stiff and cumbersome court costume heretofore commonly worn. Dispensing with the wide panniers and trains, the *polonaise* (made from four lengths of cloth) is distinguished both by the cut of the bodice, which instead of fitting down closely at the waistline, slopes gently and loosely toward the back, and the draping of the overskirt (about four inches longer than the underskirt), which at the back is drawn up into a bustle by buttons and loops of ribbon and puffed out at the hips. The *polonaise* was considered an informal dress both in England and in France, despite the elaborate workmanship often devoted to its embellishment,

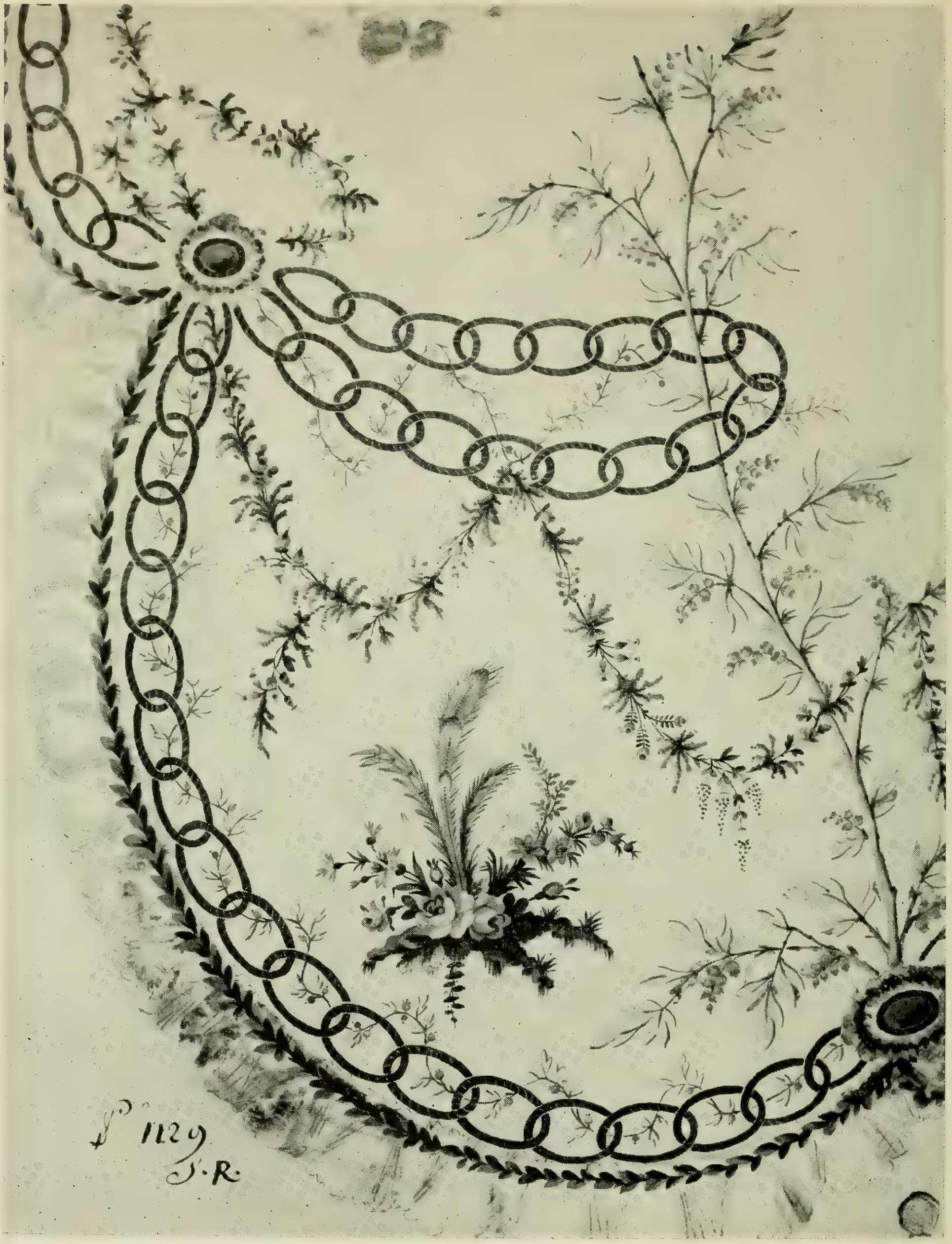


Figure 6. Project for the left lower part of the overskirt for a *polonaise*. Pencil and colored gouaches. Artist unknown (from the Fabrique de St. Ruf). France, probably Lyons, about 1785. Given by the Misses Hewitt, 1920.

whereas until the Revolution, the *robe à la française* remained "la robe d'etiquette à la cour, et la robe de cérémonie dans toute société qui se respecte au dîner, au théâtre et, sauf avis contraire, au bal."[15]

One of the Museum's twenty designs of overskirts for *robes à la française* shows an unadorned field with a large bunch of red poppies, blue cornflowers, lavender scabiosa, and a large shock of golden wheat (Fig. 5). Along the arc-like curved border of the lower edge are included more poppies and cornflowers, growing in little bunches, which diminish progressively as the border curves toward the vertical. Because of the garment's shape, the arrangement of these flowers is regular and unimpaired. However, in designing the overskirt of a *polonaise* the artist is confronted with somewhat more complex problems. Because of the rather tight gathers of the garment, the design can have free play only at the areas where the puffs occur. In addition, the designer might want to draw some attention to the gathered areas.

A drawing for a *polonaise* (Fig. 6), by an unknown designer of the Fabrique de St. Ruf,[16] is still another instance of the skill and taste of this manufactory. The central motif is a moderately-sized cluster of red roses, blue cornflowers and feathers,[17] while at one side, issuing from what might be taken for an embroidered frog or loop, is a large stalk not unlike a huckleberry, and around this is broadly looped a heavy, steel-blue and gold-wrapped chain, which also acts as the border motif, setting off, with a row of brown leaves, the ruffled edging of the garment. Entwined through the chain is a delicate huckleberry tendril and a garland of fantastic lavender flowers. The resourcefulness of the designer of this overskirt decoration is apparent in the way the various component parts are spaced, and in the course taken by the chain, which, as well as being the binding element between the various floral motifs, expresses the intended shape of the garment and acts, in simulated form, as the agent by which the garment is looped in the appropriate places.

As opposed to embroidery designs are those drawings in the collection which relate to woven fabrics, the most popular in the 18th century being brocaded silks. A large and elaborate one (illustrated on cover), probably intended as a wall-covering, shows to what pains both designer and weaver were obliged to go in the creation of such a textile. These designs take on a somewhat different pattern than those for embroidery. Brocading, introduced as the cloth is woven, is not confined to certain set areas, but occurs in the form of repeats throughout a given piece of woven material. It was popular in dress material as well as in furniture and decorative adornment. The process by which a design was woven, however, was a far more complicated one, and required more steps between the original design and the intended finished product, than was the case with an embroidered work. For

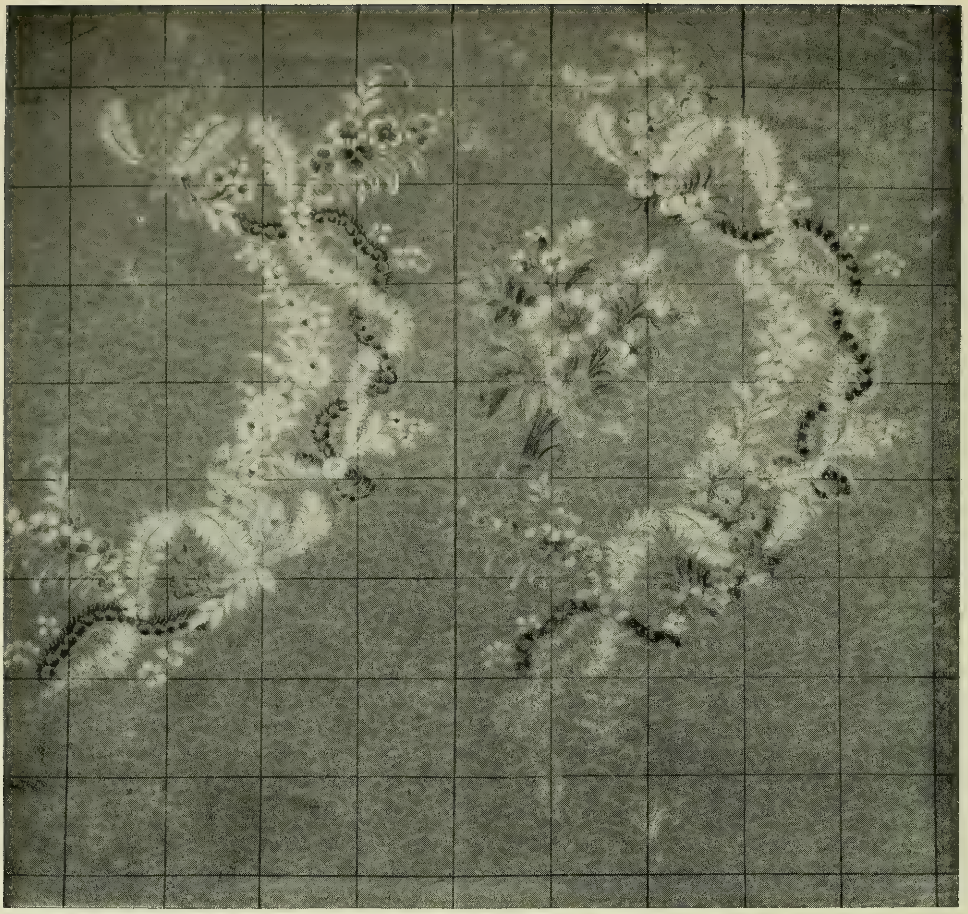


Figure 7. Project for a brocaded silk. Pastel over india ink squaring on blue-grey paper. Artist unknown. France, probably Lyons, about 1750. Given by the Misses Hewitt, 1914.

a woven fabric, the artist made a drawing, which he then translated to a mise-en-carte, a much larger drawing, showing great detail, carefully rendered on squared, or point paper, whose lines represented the warp and weft threads of the loom. From this, either the designer or the weaver made a second mise-en-carte, which showed in a detailed way the point at which a given weft thread crossed the corresponding warp thread. It was from this last step that the weaver was able to set up his loom by tieing the colored threads in groups according to the indications dictated by the second mise-en-carte. By observing this exact order and rhythm in the raising and lowering of these harnessed threads, the weaver was able mechanically to translate the design to the woven fabric as many times as he chose to do so.[18] Whether the first sketch was actually drawn to the cloth size or was done in miniature depended very much on the complexity of the design. When it was transferred to the mise-en-carte (whose lines and spaces were made considerably larger in scale than the actual cloth, for the convenience of the eyesight) the more minute details suggested themselves and were then filled in, through all the while the designer focused his attention on the main constructional lines so as to keep them in harmony with his distribution of color.

It is said that the earliest mises-en-carte of which we know date from the time of Jean Revel (1684-1751), who contributed much toward the advancement of the textile industry in Lyons, but it is quite unlikely that Revel was their inventor. Their first extensive use in France seems to have been by Philippe de Lasalle, in whose hands they were perfected, but it would be presumed that they were in use before his time, although this point has not been verified by any surviving earlier examples. The Metropolitan Museum of Art owns a mise-en-carte attributed to Lasalle, as well as the brocaded panel made from its design, which affords interesting and instructive comparison.[20] In our own collection is a project for a brocaded silk (Fig. 7) which may actually predate the more common form of mise-en-carte. It shows two repeats, one partially unfinished, of a meander of feathers and blue and white ribbon, with bunches of white flowers whose identity cannot be ascertained, the paper first being squared off by hand. The relative simplicity of the design, probably intended for a dress material, the color harmony and the rather flat surface pattern, with little attempt to indicate a third dimension, all suggest a dating of about 1750. This design has a lightness of touch and refinement, and is devoid of the gaudiness which is so indicative of an earlier style.

A number of later, fully developed mise-en-carte floral designs are also in the Museum's collection. These are carried out at least twice the size of the intended woven fabric. On the basis of style and manner of technique they can be dated within the last quarter of the 18th century and were produced, most probably, in Lyons.[21] A group of these are variations of a design showing bouquets of red roses and other brightly colored flowers with a somewhat tortuous lace ribbon meander (Fig. 8). The paper on which these designs are rendered has first been printed from an engraved plate with large squares, each which contains a number of smaller squares. The horizontal (or weft) lines are divided by tens, and the vertical (or warp) ones by eights. The paper is thus designated "dix en huit," and so the weaver knows the proportions by which to set up his loom. The flowers of this mise-en-carte are rendered with great precision according to the tiny squares, with the indications of shading being very carefully worked out from

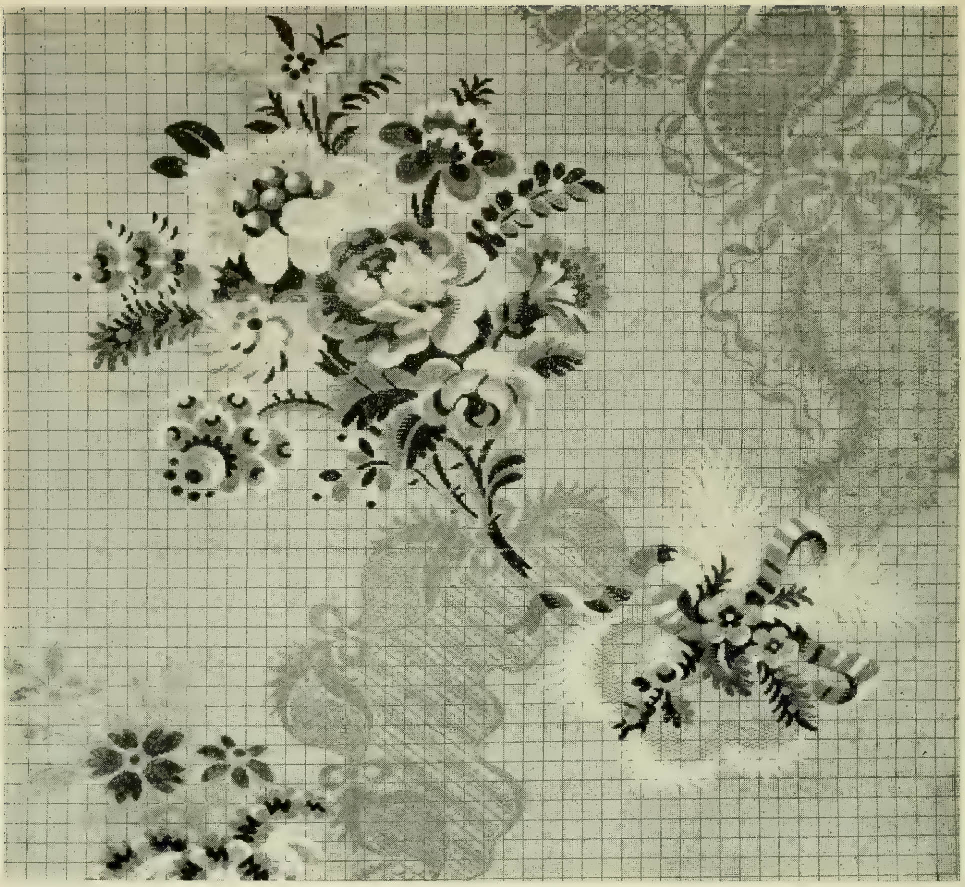


Figure 8. Mise-en-carte for a brocaded silk. Colored gouaches on engraved squared paper. Artist unknown. France, probably Lyons, about 1780. Given by Miss Josephine Howell, 1939.

one tone to another, but the over-all color effect is rather harsh, perhaps overly vivid, which, in the finished woven cloth, would be compensated somewhat by a brightly colored ground. In order to keep the weaving as simple as possible there were, generally speaking, but three tones to a single color, though in designing these brocade patterns a three-dimensional effect was often created by pattern-on-pattern and tone-on-tone manipulations, with the heightened light and shade treatment of the flowers harmonizing with the under-pattern of contrasting color. In the mise-en-carte here shown, it is the brick-red ribbon that tends to create this illusion. Fancy ground weaves were more commonly used to enhance this three-dimensionality, however.

Other mises-en-carte in the Museum's collection demonstrate this very point.

No examples of the final-step mises-en-carte exist in the Museum's collection of drawings, but in the textile department are housed various manuscript "theses" of weavers, both French and German, dating from the 1840's to the 1860's, in which are incorporated numerous examples of this type, side by side with the diagrams for setting up the loom, and samples of the fabrics woven therefrom (Fig. 10). Although not artistic in their own right, these drawings show the manner of detailed work necessary before a given design could be put into execution on the draw-loom.

Like Lasalle, one of the greatest original designers that the French textile industry has ever known was Jean-François Bony.[22] Gaining fame first by his floral designs which were carried out both in embroidery and on the loom, after the Revolution, when the Lyons silk industry was temporarily revived by orders from Napoleon and his court, Bony was called upon to design the silk coverings, in the popular Greco-Roman style, for the walls of the château of St. Cloud (now destroyed). The house of Pernon executed this commission at a cost of 25,000 francs, a tremendous sum for such work in those days. Later, Bony also designed the wall-coverings for Malmaison (where the ill-fated Empress Josephine lived and died), and, with the Lyonnais house of Bissardon, the hangings for the bedroom of Marie-Louise at Versailles, carried out in *velours ciselé*. Even if these works were not destined to bring everlasting fame to Bony, he would be remembered for his inventiveness, range and skill as a designer of floral motifs. Unfortunately, Bony apparently never signed a single drawing, so that we must act on conjecture when attributing works to him. In the Bibliothèque de l'Union Centrale des Arts Décoratifs, in the Louvre, are a number of drawings in white or colored gouaches on oiled paper which bear a traditional attribution to him,[23] and in the Museum is a similar block, of roughly three hundred drawings, which are carried out in the same medium on the same kind of paper, and which exhibit the same sure touch and decisiveness of line as do those of the Paris group. The former history of these drawings is an absolute mystery, beyond the fact that they were purchased through the Misses Hewitt, probably in France, and entered the Museum's collection over the years 1914 to 1925. Some of these drawings were first reproduced in color in those curious pictorial portfolios edited by Armand Guérinet, of Paris,[24] but no indication of owner is given in the picture captions, and, in fact, none of Guérinet's publications bears the date of issue. It is hoped that some day a clue might lead us to the pre-Cooper Union history of these interesting drawings.

One drawing in this group (Fig. 9), probably a detail intended for an embroidered dress border, is of such high quality that an attribution to

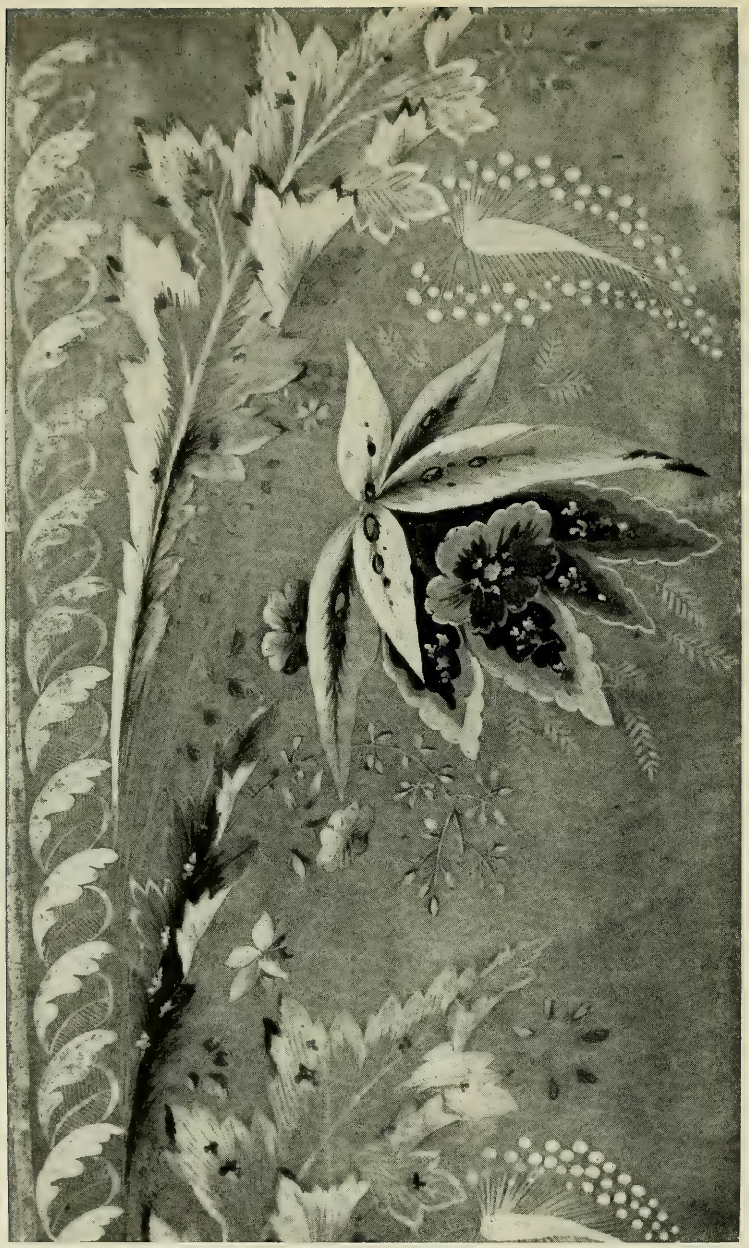
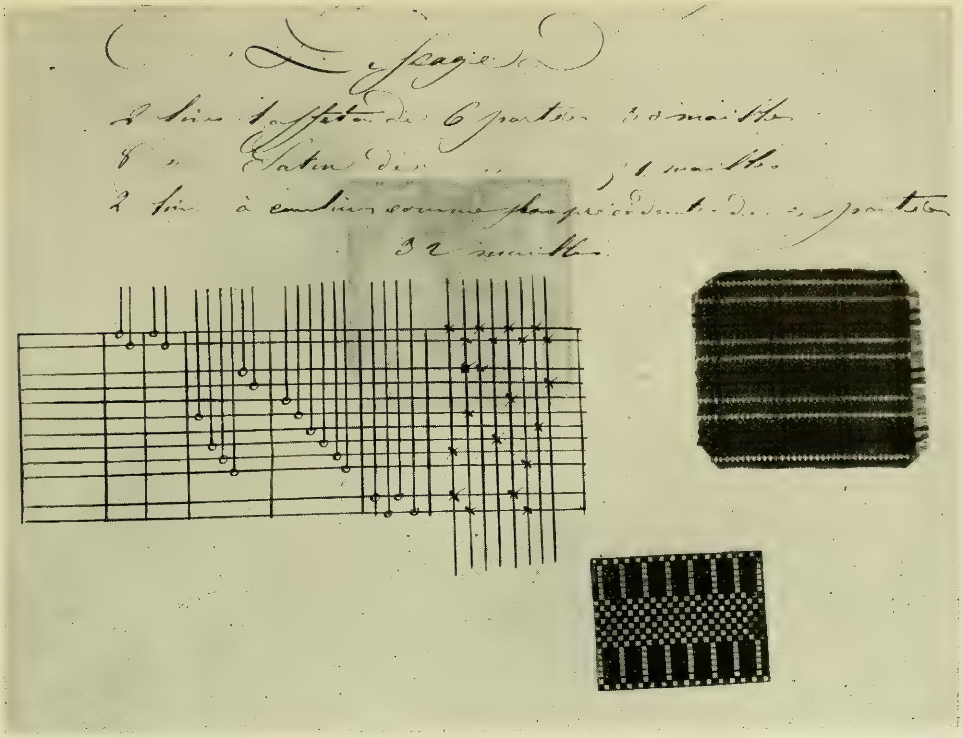


Figure 9. Project for a brocaded or embroidered dress border. Colored gouaches on oiled paper. Attributed to Jean-François Bony. France, Lyons (?), about 1790. Given by the Council, 1925.



Lisage

2 fils taffetas de 6 portées 3 d mailles

8 " Satin d° " " 1 maille

2 fils à embuvage comme plus précédent d° " portées

32 mailles

Figure 10. Page from a weaver's "Thesis," showing a cross-section type of mise-en-carte, together with the indications for tieing the loom and a sample of the textile woven therefrom. France, Lyons, about 1860. Purchased, 1939.

Bony would seem entirely possible. It shows a fantastic flower, half-daffodil, half-tiger-lily, brilliantly colored red, yellow and orange, set off against colored leaves and smaller, equally fantastic flowers. This detail must surely have produced a most striking effect on the article of clothing for which it was intended.

One of a number of Napoleonic decorative motifs (Fig. 11), also most probably by Bony, or at least by an associate, shows the Imperial eagle, wings outstretched, encircled by the laurel and oak wreaths, while suspended below is the medal of the Légion d'Honneur, founded by Napoleon in 1802. Such a design as this no doubt was intended for the covering of a piece of furniture, possibly a chair back, and is carried out in "Napoleonic blue" and white, and its simple, bold pattern suggests that it was to be executed either in a damask weave or in simple brocading. Similar drawings in this group include in the design the monograms "N J" (for Napoleon and Josephine), "N L" (for Napoleon and his second wife, Marie-Louise), or

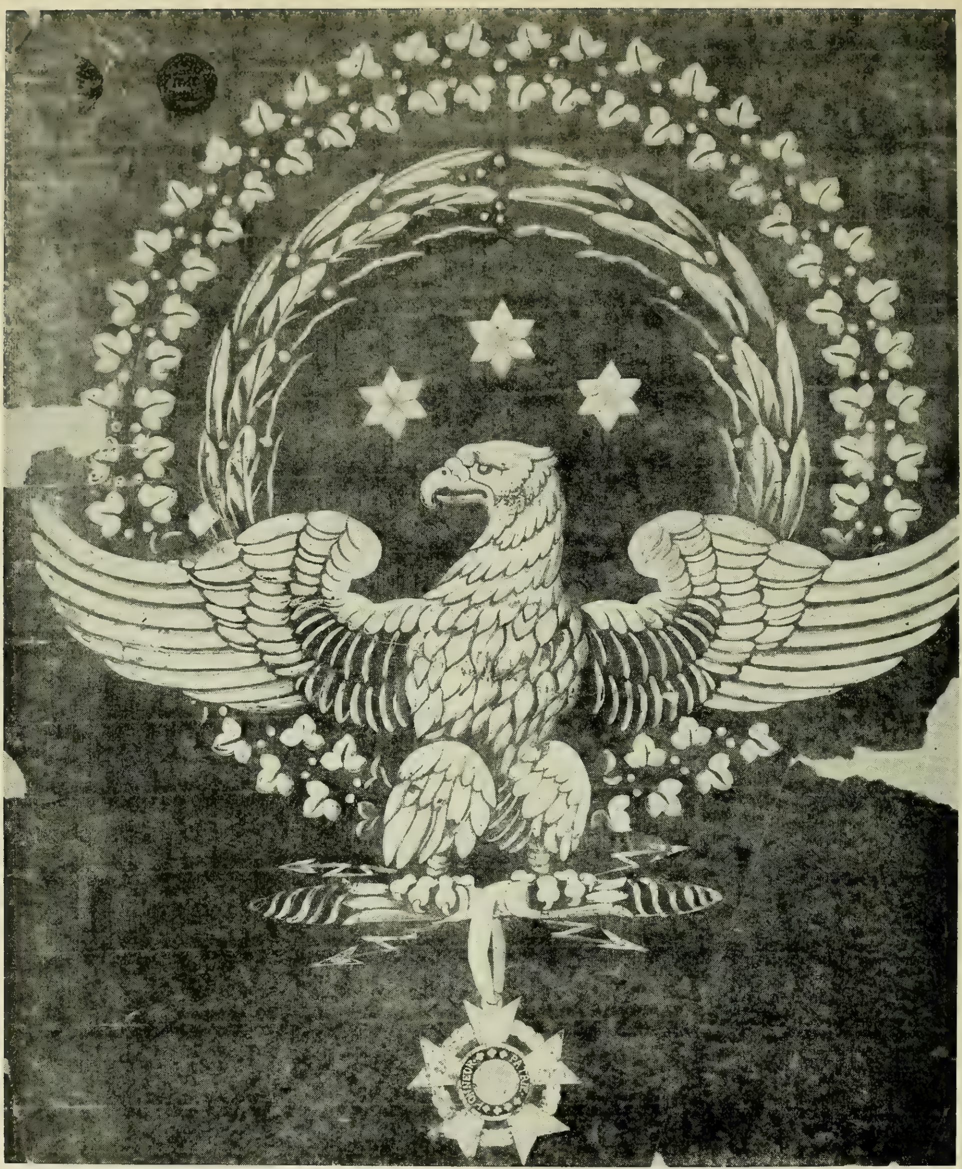


Figure 11. Project for a woven silk furniture covering. Blue and white gouaches on oiled paper. Attributed to Jean-François Bony. France, Lyons (?), about 1805. Given by the Misses Hewitt, 1923.

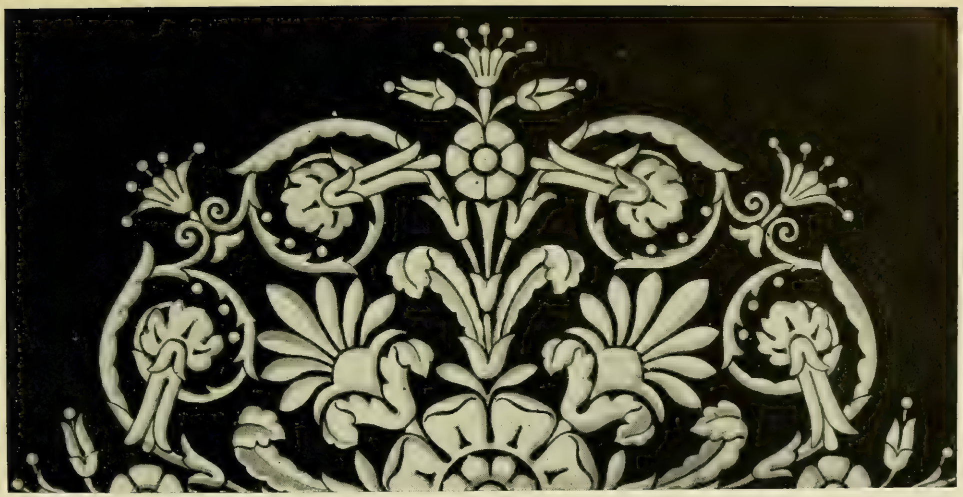


Figure 12. Project for a pile carpet. Pencil and colored gouaches. Artist unknown. France, probably Paris, about 1805-1810. Given by the Misses Hewitt, 1909.

simply "N", all of which may have come from the hand of Bony or an assistant.[25]

Also relating to this period are a number of French carpet designs in the Museum's collection. In the history of European carpet designing, two distinct tendencies occur: the geometrical patterns, of Oriental origin, and the naturalistic renderings, of strictly Western invention. In the 19th century, these two types enjoyed equal popularity. Our collection illustrates two categories of this second trend.

The first category consists of a group of drawings of ornamental arabesques, rendered in golden-yellow, white and lavender gouaches on a black ground (Fig. 12). Unlike the 18th-century Savonnerie designs, the carpets of the 19th were no longer conceived to reproduce plastic effects. The designs here mentioned, drawn to scale smaller than the finished product, seem very close to those which the Savonnerie factory turned out to embellish the châteaux of Malmaison and Compiègne.[26] Such carpets as these were of the expensive knotted type, which could be had only by the court and the very rich; the middle classes had to content themselves with moquettes and pile-less carpets, of which the best were made by the Aubusson factory.[27]

The other category of carpet designs in the Museum's collection is made up of about forty cartoons, some full size, others drawn smaller to scale, which depict vividly, often garishly colored floral patterns. Some of these cartoons are signed by the artist and bear the name of a Parisian factory

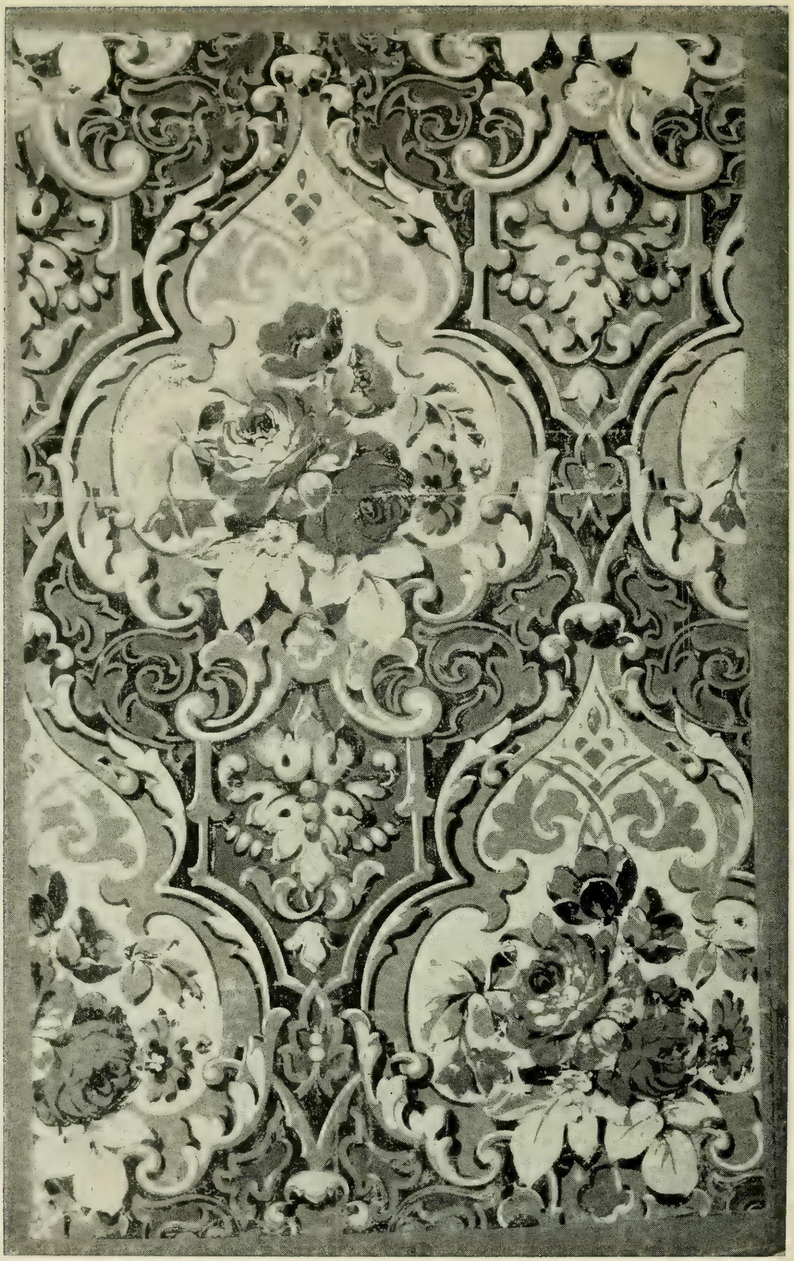


Figure 13. Cartoon (smaller to scale) for a woven carpet. Colored gouaches on heavy paper. By Virolet. France, Paris, 1848. Given by John Judkyn, 1954.

(which also evidently had London affiliations, as indicated by these inscriptions), and in two cases appear the dates 1847 and 1848. The daring use of color (dark brown, light chocolate and orange-yellow, often juxtaposed one against the other), the shamelessly borrowed but misunderstood 18th-century arabesque and the heavy overcrowded compositions all bespeak the rather undistinguished Louis Philippe period (Fig. 13). The principal interest of these designs lies in the fact that they were produced at a turning point in French carpet manufacture, for the Revolution of 1848 brought to an end the demand for expensive hand-woven carpets. Jacquard carpet looms were imported from England, where they had been in use for some years, and were featured in the Exposition of 1849. By the time of the Great Exhibition of 1851, in London, French machine-made carpets were widely known in England.[28]

These cartoons, of various and contrasting types of design, form an interesting sidelight in the general field of textile design and manufacture, for although more boldly rendered than those for clothing or furniture, they carry with them the identical peculiarities of the periods to which they belong, as do the textile designs of other categories.

Returning to earlier textile drawings, a category in which the Museum is particularly rich is that of printed cottons.[29] Developed from the painted and dyed cottons imported from India, printed cottons gained wide popularity in France and England by the middle of the 17th century. The growth of French manufacture, however, was restricted for some decades by a series of impediments. First, in 1685, the country was deprived, by the revocation of the Edict of Nantes, of the Huguenots in whose hands the new craft had been developing; fleeing their homeland, they took their skills to Switzerland, Holland and England. Then in 1686, a decree that remained in force until 1702 forbade the importation from India of fine cotton fabrics that were so useful for printing. Only toward the middle of the 18th century did cotton printers succeed in reestablishing the business throughout France; and at this moment the Bavarian, Christophe-Philippe Oberkampf (1738-1815), appeared on the scene with skills and helpers developed in Switzerland. Setting up his factory at Jouy, near Versailles, he soon took the lead. Jouy continued on into the 19th century, but began to decline after the Napoleonic era, finally closing its doors in 1843.[30]

Because of their artistic merit and the appeal of their rich range of subject-matter, much research has been expended on the history of French printed cottons; [31] but we are still far from knowing the origin or even the subject of every separate design that has been preserved.

That of the painted "indiennes" was traditionally floral or geometric. Western ingenuity, however, discovered the opportunities afforded by substituting copper-plate engraving as a means of reproduction.[32] This increase in the size of the stamp gave the designer the chance to invent new and more varied designs, the result being a change to motifs of greater pictorial content. Thus, scenic matter was easily introduced into printed cotton design.

Of the forty-odd sketches, full-sized cartoon drawings and trial proofs for printed cottons in the Museum's collection, at least four relate to the Oberkampf factory. Others come from Bolbec and Nantes, both in Normandy, from Montpellier, and the largest group, from the firm of Hartmann, of Munster, in Alsace (at that time, coming under French sovereignty). The provenance of these drawings is again unknown. A few were given in 1896 by Miss Mary A. Peoli (the Museum's first curator), as coming from the collection of her father.[33] Two years later, the bulk of the cartoons and trial proofs were given through the generosity of Miss Bridget Mahon.

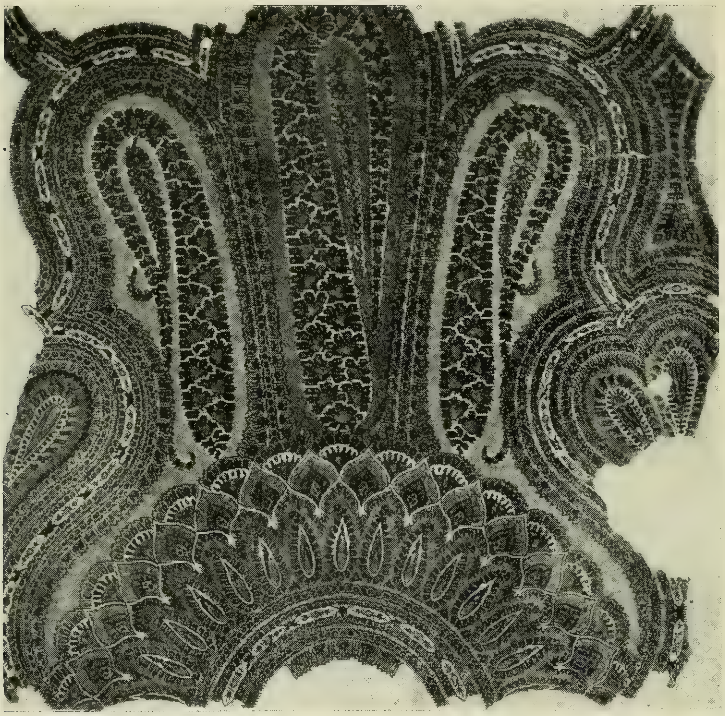


Figure 14. Project for a woven shawl. Pen and ink, with water colors. Artist unknown. Scotland, Paisley, about 1840. Purchased, 1940.

These, therefore, were among the first textile designs to enter the Museum's collection — a worthy beginning, indeed! Because of their documentation and interest, individually as well as collectively, a chronological listing of them is given in catalogue form at the end of this article, since space prohibits a more lengthy discussion of each example.

Except for one, *La route de Jouy,* all of these cartoons are executed in pen and ink, usually with additions of brown and grey watercolor washes, and white chalk highlights. Some examples show the paper squared off afterwards, and in many cases the drawings are on more than one sheet of paper, pasted together. As would be expected, their quality and interest vary according to the individual talent of the designer. The trial proofs show that the copperplates have been boldly engraved or etched, sometimes in reverse and at others the composition goes the same way as in the drawing, so that each detail will stand out clearly when printing takes place on the textile itself.

As for later 19th-century textile designs, this Museum has a less numerous,[34] though no less interesting, selection than the earlier examples already discussed. Two categories which may be singled out for mention are the designs for woven shawls, made in Paisley, Scotland, and in France, possibly in Alsace. Of the first type, our collection can boast of three examples (Fig. 14). Paisley shawls were manufactured according to the same principles as employed for brocaded silks.[35] A sketch (like those shown in the illustration) was first drawn in miniature, detail by detail, so that the designer was able to focus his attention upon separate decorative motifs constituting the pattern, keeping these in harmony with his choice of color distribution. The drawing was next transferred to a mise-en-carte, and finally, to a more detailed mise-en-carte before it was woven on the draw-loom. Only the materials used and the manner in which the loom was tied determined the difference between the finished Paisley shawl and a brocaded silk. The early Paisley shawls (that is, before about 1810) had plain centers with narrow borders, often woven separately and sewed on. These narrow border designs were a curious mixture of small florid figures surrounded by lines in arabesques on feathery stems. As time went on, these feathers evolved into the pine-cone motif, which had its full flowering in the 1840's. It is from about this time that our drawings come, and one, in fact, shows this motif before the tip of the cone had reached absurd, tendril-like proportions.

The dozen or so drawings of details of French shawls in the collection can be dated toward the middle of the 19th century. They entered the Museum with certain of the designs attributed to Bony, but first, had been reproduced in one of Guérinet's portfolios.[36] Some of these drawings show debased turkey-carpet motifs; others include garishly colored roses, placed against a field of brilliantly contrasting color, whose shape resembles, in a modified way, the same pine-cone motifs found in Paisley shawls (Fig. 15). Such designs as these, which seem so contrary to present-day taste, gained great popularity in France, and were reproduced in printed as well as in woven fabrics of the day. But, like most fads that strike public fancy, within a few years these highly colored, brightly patterned shawls were replaced by plain, softly colored ones, entirely devoid of pattern. These drawings, therefore, represent another passing phase in the constant evolution of textile manufacture and fashion design, which is carried right along in our collection down to the present day.

The variety of contemporary textile designs in the Museum's collection is limited to two categories: two designs for ballet dress material by Léon Bakst and over eight hundred for French printed silks. Despite the sharp numerical difference between these two types, the interest of one is as great as that of the other. Bakst's designs bear on them the notations, "Schéherazade" and "Teheran," respectively, which relate to his famous productions of the early years of our century. The designs for dress silks, products of a number of Paris ateliers, by their quantity, show the infinite variety possible within a fairly limited range, for almost all of the patterns are of abstract designs. It is hoped that this branch of the Museum's collection, in particular, will continue to grow.

In this brief survey the attempt has not been made to cover all categories of textile drawings in the Museum's collection, but, rather, to focus upon certain of the more interesting types which deserve attention. In speaking of the purposes for which these designs serve, Miss Eleanor Garnier Hewitt, the Museum's co-founder, stated that "the value is beyond words, . . . not one atom of the work of an artist should ever be destroyed since the study of the change of style, manner, technique and character of work and composition from youth to age, often adds valuable instruction, higher inspiration and more lofty conception to the years of student work.[37] It was for these very reasons that our collection of textile designs has been carefully gathered; and not only for students, but for designers and any others who find them useful, the collection is maintained and developed as our facilities and generous donors permit.

RICHARD PAUL WUNDER

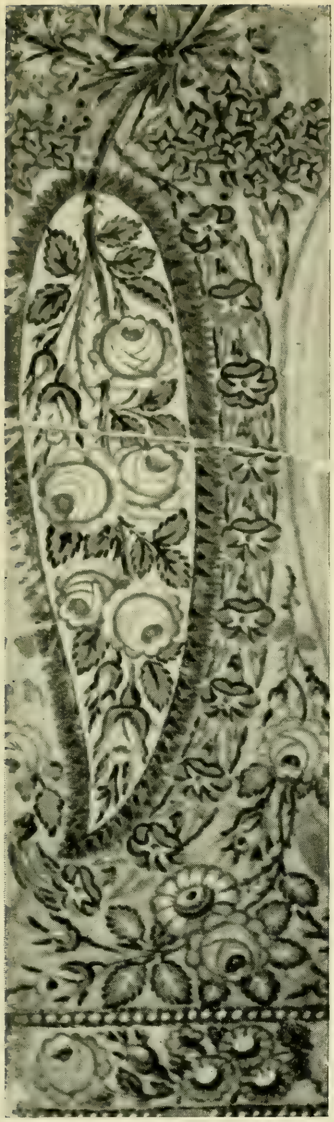


Figure 15. Project for a motif in a printed or woven shawl. Colored gouaches on oiled paper. Artist unknown. France, about 1850-1860. Given by the Council, 1924.

NOTES

[1] Giorgio Vasari, Opere (ed. Milanesi, 1878-85), Book I, p. 168.

[2] Such as those precious designs in the Louvre sketchbook, of about 1450 (reprod. in: Victor Goloubew, Les Dessins de Jacopo Bellini, etc., Bruxelles, 1908, Vol. II, pl. XCV).

[3] In the Codex Vallardi, also dating toward the mid-15th century (reprod. in: Antonio Degenhart, Antonio Pisanello, Vienna, 1945, pl. 136 and 137), and costume designs in the Ashmolean Museum, at Oxford (*ibid.,* pl. 78), and in the Musée Bonnat, at Bayonne (*ibid.,* pl. 81).

[4] Reproduced in: Sergio Ortolani, Il Pollaiuolo, Milano, n.d. [1948], pl. 44 to 57.

[5] Two particularly beautiful textile drawings by an unknown 15th century Lombard hand are preserved in the Fogg Museum of Art, Harvard University (reprod. in: Agnes Mongan and Paul J. Sachs, Drawings in the Fogg Museum of Art, Cambridge, Mass., 1946, Vol. I, p. 18, No. 23, and Vol. II, fig. 23 and 24).

[6] Tapestry design, being so distinct a subject of study, is omitted from consideration in the present article.

[7] A few scattered earlier designs exist, however, such as those for late 17th and early 18th-century Spitalfields silks (reprod. in: J. F. Flanagan, Spitalfields Silks of the 18th and 19th Centuries, Leigh-on-Sea, 1954, fig. 63 ff.).

[8] Lyons, the silk center of France, by 1783, contained some 15,000 embroiderers and weavers (Henri Clouzot, Le Métier de la Soie en France, Paris, n.d. [1914], p. 96).

[9] No. 49.50.206; measures 15⅜ x 9¾ inches. Of 68 leaves, it originally contained 98, but leaves 69 to 98 (probably blank) have been cut out. Some of the numbers have been repeated, one is missing, and there is a gap between numbers 1490 and 1500, probably accounted for by missing pages. The names of 16 different designers, some spelled various ways, accompany the patterns. This book was purchased in Paris in 1949.

[10] The design is to be found in the pattern record book on p. 57 verso. There is an alternate of this design, also by Mademoiselle Montalon, in the Museum's collection.

[11] Charles-Germain de Saint-Aubin (in: L'Art du Brodeur, Paris, 1770) describes the methods by which a design was prepared for the embroiderer.

[12] Belle M. Borland, Philippe de Lasalle, Chicago, 1936, pp. 40 and 41, reprod., pl. IV (a better reproduction of this textile is to be found in: Musée Rétrospectif de la classe 83 soies et

tissus de soie, Rapport de comité d'Installation, Paris, 1900, facing p. 12).

[13] Reproduced in: Alexandre Poidebard and Jacques Chatel, Camille Pernon, Lyons, 1912, p. 32.

[14] H. Wescher and R. Zeller, The von der Leyens of Crefeld, in *Ciba Review*, Basle, No. 83, December, 1950, p. 3011.

[15] Galerie des modes et costumes français dessiné d'après nature, Paris, 1778-1787 (republished, Paul Cornu ed., Paris, 1911-1912), Vol. I, p. XII.

[16] Because the pattern number on the drawing precedes the first in sequence of the pattern record book, the name of the artist cannot be determined.

[17] In the Museum's textile department is an overskirt of about the same period on which actual feathers, caught under galloon, form an important decorative adjunct.

[18] This helpful enlightenment about weaving techniques has been graciously given by Miss Lois Clarke and Miss Berta Frey.

[19] Herman A. Elsberg, The Textiles of Lyons, Their Designs and Their Designers, in *Bulletin of the Museum of Fine Arts*, Boston, Vol. XXX, No. 178, April, 1932, pp. 28-33.

[20] A full-sized colored reproduction of a detail of one such mise-en-carte, attributed to Lasalle, appears in: Clouzot, *op. cit.*, pl. XLIII. The Metropolitan Museum of Art's Lasalle mise-en-carte is discussed in: Frances Morris, A "Mise en Carte" of Philippe de Lasalle, in *Bulletin of the Needle and Bobbin Club*, New York, Vol. IV, No. 2, October, 1920, pp. 18-25; and John Goldsmith Phillips, Acquisitions of Eighteenth Century French Silks, in *Bulletin of the Metropolitan Museum of Art*, New York, Vol. XXIX, No. 2, February, 1934, pp. 26 and 27.

[21] In the Metropolitan Museum of Art is a mise-en-carte (No. 28.40.21), relating to this same general group, which comes from a Lyonnais factory and is dated 1780 on the verso.

[22] The best account of Bony's activity is: Henri Algoud, Jean-François Bony, Décorateur de Soierie, in *Revue de l'Art*, Paris, Vol. 41, 1922, pp. 131-143.

[23] One drawing carries the inscription: "Broderie 420 depuis le no. 72 Bonny (*sic.*)" (Algoud, *op. cit.*, p. 143).

[24] Armand Guérinet (ed.), Indiennes Etoffes chinoises. Toiles de Jouy, Paris, n.d. [ca. 1900], 1re Série, 2e Série, 4e Série and 6e Série; and, by the same publisher, Recueil de Vieilles Etoffes et de Dessins de Tissus anciens et modernes, Paris, n.d. [ca. 1900]. The dating of Guérinet's publications is complicated by the fact that the Library of Congress has never issued cards on them.

[25] Bony also made the embroidery designs for the coronation robes of the Empress Josephine, in 1804. The Museum's textile department possesses a large number of merchants' samples of embroidery for gentlemen's coats and waistcoats which bear a traditional attribution to Bony.

[26] Similar examples reproduced in: Armand Guérinet (ed.). Les Nouvelles Collections du Musée de l'Union Centrale des Arts Décoratifs, Paris, n.d. [ca. 1900], 19e Série, pl. 87-103; and in current illustrated guide books on Malmaison and Compiègne.

[27] A. Varron, The Beginning of the Modern Carpet Industry, in *Ciba Review*, Basle, No. 23, July, 1939, pp. 816-820.

[28] *Ibid.*, The Technique of Modern Carpet Manufacture, pp. 822-825.

[29] Printed cottons are often erroneously referred to as *toiles*. A *toile*, technically speaking, is any cloth made of flax, hemp, cotton or horse-hair (the word is also loosely used in France to designate the canvas on which an oil painting is made). It is hoped that with growing knowledge the vague use of this word as the designation for a French or English printed cotton will be abandoned.

[30] A. Juvet-Michel, The Great Textile Printing Factories in France, in *Ciba Review*, No. 31, March, 1940, pp. 1098-1106.

[31] Armand Guérinet (ed.), *op. cit.*, 9e Série; Henri Clouzot, La Manufacture de Jouy et la toile imprimée au XVIIIe siècle, Paris et Bruxelles, 1926; Clouzot and Frances Morris, Painted and Printed Fabrics: The History of the Manufactory at Jouy and Other Ateliers in France, 1760-1815, New York (The Metropolitan Museum of Art), 1927; The Metropolitan Museum of Art, Catalogue of a Retrospective Exhibition of Painted and Printed Fabrics, New York, 1927; Clouzot, Histoire de la Manufacture de Jouy et de la Toile Imprimée en France, Paris et Bruxelles, 1928 (2 vols.); Hermann Gerson (ed.), Ausstellung von Antiken, Bedruckten Stoffen, Berlin, 1929; Morris, Exhibition of Printed Fabrics, with Original Cartoons and Designs, in *Chronicle of the Museum for the Arts of Decoration of Cooper Union*, New York, Vol. I, No. 1, Winter, 1934-35, pp. 3-11; Henry-René d'Allemagne, La Toile Imprimée et les Indiennes de Traite, Paris, 1942 (2 vols.); Bernard Roy, Une Capitale de l'Indiennage: Nantes, Nantes, 1948; Jacques-Henry Gros, Le Musée de l'Impression — Exposition de l'Ete 1952, in *Bul-*

letin de la Société Industrielle de Mulhouse, Mulhouse, Nos. III and IV, 1952, pp. 1-13; Société Industrielle de Mulhouse — Musée de l'Impression, Présentation de la Collection Louis Becker, Mulhouse, 20 juin — 29 août 1954.

[32] France did not adopt the copperplate printing of cottons until about 1770, though this process was already much used in England, Ireland and Holland prior to this date (Victoria and Albert Museum (Gerard Brett), European Printed Textiles, London, 1949). Later, the roller took the place of the copperplate as the means of reproduction.

[33] These cartoons were evidently held apart from the drawings of the John J. Peoli collection, which was sold, American Art Association, New York, May 8th (and following days), 1894.

[34] The reason for this apparent earlier disinterest is explained by Miss Eleanor Garnier Hewitt: "Owing to its restricted space, the Museum must make a general rule not to accept nor exhibit objects later than the first quarter of the 19th century . . ." (Eleanor G. Hewitt, The Making of a Modern Museum, lecture given before the Wednesday Afternoon Club, New York, 1919 (privately printed), pp. 16 and 17).

[35] Matthew Blair, The Paisley Shawl and the Men Who Produced it, Paisley, 1904; A. M. Stewart, The History and Romance of the Paisley Shawl, Glasgow, n.d. [ca. 1939]; and John Irwin, Shawls — a Study in Indo-European Influences, London, 1955.

[36] Armand Guérinet (ed.), Recueil de Vieilles Etoffes et de Dessins de Tissus Anciens et Modernes, Paris, n.d. [ca. 1900], pl. 7 (in color); and Guérinet, Indiennes Etoffes Chinois, Japonaise, Mexique Toiles de Jouy, Paris, n.d. [ca. 1900], 5e Série, pl. 5, 11 and 13 (all in color).

[37] Eleanor G. Hewitt, *op. cit.*, p. 17.

DESIGNS FOR PRINTED COTTONS IN THE MUSEUM'S COLLECTION

1. *Pastoral scene with peacocks and poultry* (trial proof; two plates). Designer unknown. Manufactory unknown (French ?) (after Robert Jones, of Old Ford, River Lea, north of London). Dated after 1761. It is possible that these proofs come from a French manufactory that pirated Jones's designs. The original version shows on the side of the stone on which the flutist sits, "R. Jones 1761." An example of this later (French) version is the Museum's textile department, as is also a fragment of Jones's original. The scene is taken from an etching dated 1652, by Nicolas Berchem, the peacocks and poultry from an engraving of 1740 by Josephus Sympson, after the painting by Marmaduke Cradock, and the dog and stag come from Francis Barlow's book, Animals of Various Species, etc., ca. 1671, pl. 18. Reference: Frances Morris, Exhibition of Printed Fabrics, with Original Cartoons and Designs, in *Chronicle of the Museum for the Arts of Decoration of Cooper Union,* New York, Vol. I, No. 1, 1934-35, No. 1 (as ca. 1770); Henry-René d'Allemagne, La Toile Imprimée et les Indiennes de Traite, Paris, 1942, reprod. textile, Vol. II, pl. 37 and 38; Société Industrielle de Mulhouse — Musée de l'Impression, Présentation de la Collection Louis Becker, Mulhouse, 20 juin — 29 août 1954, p. 13, No. 416TP; Victoria and Albert Museum (Peter Floud), English Chintz: Two Centuries of Changing Taste, London, 1955, p. 8, No. 2.

2. *Le Tombeau de Jean-Jacques Rousseau* (trial proof). Designer: Jean-Baptiste Huet. Manufactory: Oberkampf, of Jouy. Dated 1780. This same subject was also brought out by Gorgerat, of Nantes, in 1782 (textile reprod. in Allemagne, Vol. II, pl. 89), and by Favre, Petitpierre et Cie., of Nantes (mentioned, *ibid.,* Vol. I, p. 114). Reference: Morris, *op. cit.,* No. 3 (as ca. 1800).

3. *Le Tombeau de Jean-Jacques Rousseau* (cartoon). Designer unknown (imitator of Huet). Manufactory unknown (probably not Oberkampf). Dated after 1780. Similar to preceding, though with positions of the islands changed. Possibly a pirated design. Reference: Morris, *op. cit.,* No. 3.

4. *Don Quixote* (cartoon and trial proof). Designer: Lagrenée (?). Manufactory: Oberkampf, of Jouy. Dated 1780. Reference: Armand Guérinet (ed.), Indiennes Etoffes chinoises, Toiles de Jouy, Paris, n.d. [ca. 1900], 9e Série, reprod. textile, pl. 14; Morris, *op. cit.,* No. 2 (reprod. with textile, p. 4); Henri Clouzot, Histoire de la Manufacture de Jouy et de la Toile Imprimée en France, Paris et Bruxelles, 1928, textile reprod., Vol. II, pl. 4, and mentions (Vol. I. p. 42) that this subject was repeated in 1813 by Hem for Oberkampf; Allemagne, *op. cit.,* reprod. textile, Vol. II, pl. 160 (as by Gorgerat, of Nantes, dated 1785); Bernard Roy, Une Capitale de l'Indiennage: Nantes, Nantes, 1948, textile re-

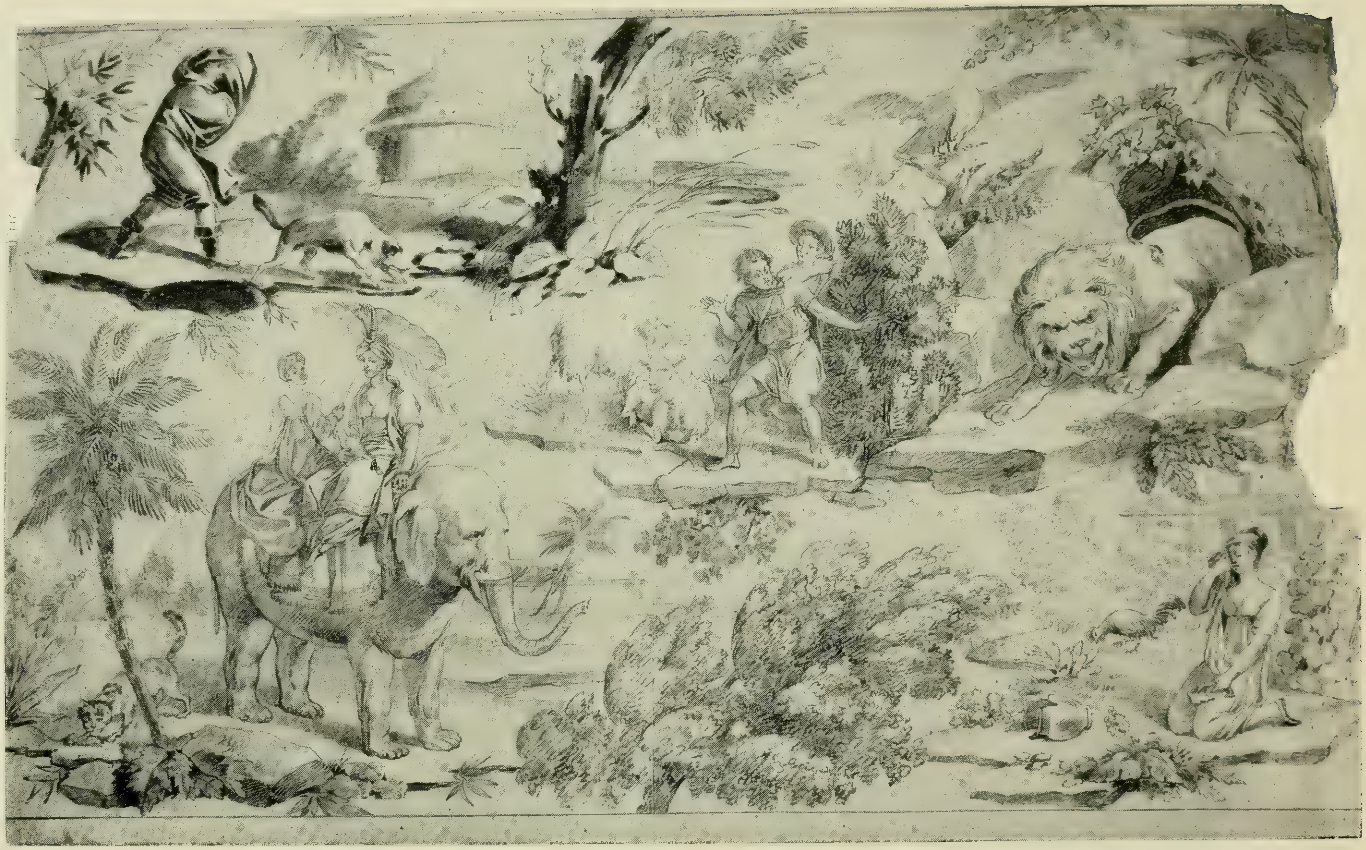


Figure 16. Cartoon for the printed cotton, *Les Fables de La Fontaine*. Pen and ink with grey washes. Artist unknown (possibly for the manufactory of Hartmann et Fils). France, Munster, about 1820. Given by Miss Bridget Mahon, 1898.

prod., facing p. 66 (as by Gorgerat). It is not known whether Lagrenée was working for Oberkampf as early as 1780.

5. *La course au sanglier* (fragments of an incomplete cartoon). Designer unknown. Manufactory: Lafosse, Lionnet et Médard Cie., of Montpellier. Dated 1785. Reference: Morris, *op. cit.*, No. 4 (as ca. 1800); Clouzot, La Manufacture de Jouy et la toile imprimée au XVIIIe siècle, Paris et Bruxelles, 1926, textile reprod., pl. XXII; *ibid.*, 1928, textile reprod., Vol. II, pl. 63; Société Industrielle de Mulhouse, *op. cit.*, p. 19, No. 473TP (possibly misnumbered, since the same number appears for two different items in the catalogue).

6. *La course anglaise* (two fragments of an incomplete cartoon). Designer unknown. Manufactory: Favre, Petitpierre et Cie., of Nantes. Dated 1789. On the reverse of both drawings is written (in pencil in a later hand): "Desrais ft.," possibly referring to Claude-Louis Desrais (1746-1816), an illustrator, though no evidence can be found which might indicate his connection with this manufactory. These fragments are parts of three large islands. Reference: Allemagne, *op. cit.*, textile reprod., Vol. II, pl. 151.

7. *Neptune*, or *L'Empire des Mers* (fragment of a cartoon). Designer: possibly Belorgé or Cholet. Manufactory: Favre, Petitpierre et Cie., of Nantes. Dated 1794. This drawing is for one of eight islands found in the textile. Reference: Guérinet, *op. cit.*, textile reprod., pl. 51; Allemagne, *op. cit.*, lists textile, Vol. I, p. 114, textile reprod., pl. XX; Roy, *op. cit.*, textile reprod., facing p. 136.

8. *La fête champêtre* (cartoon). Designer: Belorgé or Cholet. Manufactory: Favre, Petitpierre et Cie., of Nantes. Dated about 1805. Reference: attribution made by M. Philippe Bezault, Conservateur du Musée de l'Impression sur Etoffes, Mulhouse (in a letter to this Museum, dated January, 1956).

9. *Chasse et pêche dans la vallée de la Wormsa* (unfinished cartoon). Designer: J. L. Lebert, l'aîné. Manufactory: Hartmann, of Munster. Dated 1810. A slightly different version of this subject, called *La chasse suisse*, was brought out by Belloncle et Malfeson, of Rouen, about 1820 (Société Industrielle de Mulhouse, *op. cit.*, p. 12, No. 452TP). Reference: Guérinet, *op. cit.*, textile reprod., pl. 17; identification made on basis of Bezault's letter.

10. *Les Monuments de Paris* (cartoon). Designer unknown. Manufactory: Hartmann, of Munster. Dated about 1810. The dating of this cartoon is based on the facts that the triumphal arch of the Place du Carrousel was erected by Percier and Fontaine in 1806, while the Chappe telegraph, which surmounted the towers of the church of St. Sulpice (and which appears in this drawing) was put into operation about 1810 (observations made by Bezault). In the textile the arrangement of the islands differs slightly. A similar subject was brought out by Oberkampf, after the designs of Hippolyte Lebas, in 1816 (textile reprod. in Clouzot, *op. cit.*, 1926, pl. XVIII). In the Museum's textile collection is still another version which may have been produced in Nantes. Reference: Morris, *op. cit.*, No. 7 (as ca. 1820); Allemagne, *op. cit.*, textile reprod., Vol. II, pl. 95.

11. *Fauchon la Vielleuse* (cartoon). Designer unknown. Manufactory: possibly F. Keittinger et Cie., or Le Maître, of Bolbec. Dated about 1811. Reference: Allemagne, *op. cit.*, textile reprod., Vol. II, pl. 189; Société Industrielle de Mulhouse, *op. cit.*, p. 11, No. 107TP (where it is called: Nantes, ca. 1800).

12. Unidentified subject (an infant being suckled by a she-goat) (cartoon, cut off along left margin). Designer unknown. Manufactory unknown (possibly of Bolbec). Dated about 1811. The style of draftsmanship reveals that this cartoon is by the same artist who executed *Fauchon la Vielleuse*. An example of this textile is in the Museum's textile collection.

13. *Anais et Numa* (?) (incomplete cartoon). Designer unknown. Manufactory unknown (possibly of Bolbec). Dated about 1811. This drawing also is probably by the same artist who executed the above two cartoons. The subject might also be *Apollo and the Muses* (compare with textile reprod. in Allemagne, *op. cit.*, Vol. II, pl. 113, and mentioned, Vol. I, p. 112, as coming from Favre, Petitpierre et Cie., of Nantes, dated 1818).

14. Unidentified subject (Diana seated in a landscape with a dog). Designer unknown. Manufactory unknown. Dated probably about 1810. This fragment, probably comprising one island of a much larger composition, shows a pseudo-classical landscape at the left, and a mountainous, partially wooded landscape at the right.

15. *Scenes from a classical comedy* (cartoon). Designer unknown. Manufactory unknown. Dated about 1810-1820. It is quite possible that this cartoon was never carried to final execution. The subject, traditionally identified as Molière's *Sganarelle*, and not opposed by Bezault, seems not to relate to this play, but may have been taken from some other work by this author.

16. *Les quatre élements* (cartoon and one pre-

liminary drawing). Designer: J. L. Lebert, l'ainé. Manufactory: Hartmann, of Munster. Dated about 1820. The allusions represented are: Jupiter for *Fire;* a river god for *Water;* Apollo and Daphne for *Air;* and Deucalion and Pyrrha for *Earth.* Described along the lower margin by the artist, and signed: "L . . . f . . ./."

17. *Les quatre élements* (three alternate unfinished cartoons). Designer: J. L. Lebert, l'ainé. Manufactory: Hartmann et Fils (successors to Soehnée et Cie.), of Munster. Dated about 1820. These studies represent a second version of this same subject, with the same emblematic allusions. Reference: Guérinet, *op. cit.,* textile reprod., pl. 20; composition and textile discussed in: Clouzot, La Tradition de la Toile imprimée en Alsace, in *La Renaissance,* Paris, Vol. 2, 1919, pp. 284-289; Jacques-Henry Gros, Le Musée de l'Impression — Exposition de l'Eté 1952, in Bulletin de la Société Industrielle de Mulhouse, Mulhouse, Nos. III and IV, 1952, pp. 10 and 11, textile reprod., fig. 9.

18. *Les quatre saisons* (cartoon; two parts). Designer: J. L. Lebert, l'ainé (?). Manufactory: Hartmann et Fils, of Munster. Dated about 1818-1820. In 1818 the House of Hartmann changed its name to "Hartmann et Fils" (Clouzot and Morris, Painted and Printed Fabrics: The History of the Manufactory at Jouy and Other Ateliers in France, 1760-1815, New York (The Metropolitan Museum of Art), 1927, p. 56). The allusions represented are: Flora and Zephyr for *Spring;* Ceres for *Summer;* Bacchus and Silenus for *Autumn;* and Aquilon for *Winter.* Reference: cartoon identified by Bezault.

19. *Les allégories: Musique, Peinture, Sculpture et Architecture* (sketch for a cartoon). Designer: J. L. Lebert, l'ainé (?). Manufactory: Hartmann et Fils, of Munster (?). Dated about 1815-1820. Bezault suggests that this composition might be inspired by Pillement, though the drawing is certainly not by him.

20. *Les Français en Egypte* (cartoon). Designer unknown. Manufactory unknown (possibly of Alsace). Dated 1815. Bezault suggests that this subject may have been inspired by a Restoration play or novel. Reference: Guérinet, *op. cit.,* textile reprod., pl. 32 (as by Huet, for Overkampf); Morris, *op. cit.,* No. 8 (as ca. 1825); Allemagne, *op. cit.,* textile reprod., Vol. II, pl. 195.

21. *La route de Jouy,* or *La chasse au cerf* (cartoon). Designer: Horace Vernet; engraved by George Lemeunnié. Manufactory: Oberkampf, of Jouy. Dated 1815. This drawing (in sanguine and red chalk), which might be a study for the actual engraving, bears the inscription along the top margin: "M.M. Laveissière et Chamont," which may be the name of a later manufactory. A change between this drawing and the textile occurs in the inscription on the signboard; in the cartoon it reads: "Ligne du Grand Maître . . . Rond de Nagu . . . Rond Victor," whereas in the textile (example in the Musée de l'Impression, at Mulhouse) are found the names of designer and engraver. However, in that example reproduced in Allemagne (Vol. II, pl. 152), the signboard is shown blank. These discrepancies are explained in: The Metropolitan Museum of Art, Catalogue of a Retrospective Exhibition of Painted and Printed Fabrics, New York, 1927, p. 29 that: "there are several versions of this plate, some of which are unsigned and poorly copied." The small building by the bridge is the celebrated "Maison du Pont de Pierre" (identified by Bezault), where Oberkampf printed his first textile (ca. 1760), before the construction of his factory at Jouy; this famous house also appears in the textile by Huet, Les travaux de la manufacture (textile reprod. in Allemagne, *op. cit.,* Vol. I, fig. I). It is possible that this cartoon is not the original one for Oberkampf's textile.

22. *Jeanne d'Arc* (cartoon). Designer: Charles Chasselat, Paris. Manufactory: Hartmann, of Munster. Dated 1817. Another version of this subject was done by F. Keittinger, of Bolbec, about 1820 (textile reprod. in Allemagne, *op. cit.,* Vol. II, pl. 133). This drawing is signed and dated by the artist. Reference: Morris, *op. cit..* No. 6 (reprod. with textile, p. 10); Clouzot and Morris, *op. cit.,* textile reprod., pl. XXVII.

23. *Scenes from Voltaire's "Henriade"* (cartoon and four preliminary drawings). Designer: F. Peters. Manufactory: Hartmann et Fils, of Munster. Dated about 1820. Quotations from Voltaire's text accompany the scenes represented, and are as follows: upper left: Chant 1, lines 229-232; upper right, Chant 10, lines 512-514; center, unknown (King Henri IV in battle); lower left, Chant 10, lines 48-49; lower center, Chant 8, lines 180-181; lower right, Chant 9, lines 344 and 348. This subject was repeated by Favre, Petitpierre et Cie, of Nantes, about 1820 (mentioned in Allemagne, *op. cit.,* Vol. I, p. 113), and at Rouen, about 1825, after the engraving of Henry (textile reprod., *ibid.,* Vol. II, pl. 138). Reference: Morris, *op. cit.,* No. 10 (as scenes from the life of Philippe de Mornay, dated 1820-1830).

24. *La vie de Bélisaire* (cartoon and one unfinished alternate scheme). Designer unknown. Manufactory: Hartmann et Fils, of Munster. Dated about 1820. No textile has yet been found to correspond with this cartoon.

25. Unknown subject (scenes from the life of an imaginary or legendary hero) (cartoon). Designer unknown. Manufactory: possibly Hartmann et Fils, of Munster. Dated about 1820. This cartoon, which shows five islands, was probably executed by the same artist as did *La vie de Bélisaire*. The subject may be one taken from French literature. It is possible that a textile was never made from this composition.

26. *Les fables de La Fontaine* (cartoon) (Fig. 16). Designer unknown. Manufactory: Hartmann et Fils, of Munster. Dated about 1820. The islands represent: upper left, *The Oak and the Reed* (Book I, No. 22); center right, *The Shepherd and the Lion* (Book VI, No. 1); lower left, *The Rat and the Elephant* (Book VIII, No. 15); lower right, *The Dairy-Maid and the Pot of Milk* (Book VII, No. 10). Another version of the fables of La Fontaine was brought out by a Rouen firm about 1820 (Allemagne, *op. cit.*, textile reprod., Vol. II, pl. 165). No textile has yet been found to correspond with this cartoon.

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CHRONICLE OF THE MUSEUM
FOR THE ARTS OF DECORATION
OF THE COOPER UNION

Sixtieth Anniversary Jubilee

1897-1957

VOL · 2 · NO · 9 AUGUST · 1957

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CHRONICLE OF THE MUSEUM FOR THE ARTS OF DECORATION OF THE COOPER UNION

VOL · 2 · NO · 9 AUGUST · 1957

THE INTEREST AND ENTHUSIASM of the Museum's friends who joined in celebrating its sixtieth anniversary have determined the contents of the present issue of the *Chronicle.* The anniversary exhibition, "Ends and Beginnings," is to some extent recorded in the newly-published picture-book, *An Illustrated Survey of the Collections;* the Anniversary Jubilee in May, attended by the largest audience yet to assemble at the Museum, produced a demand for a similar record. The *Chronicle* therefore prints the text of the addresses made at the anniversary celebration on 22nd May, 1957, in which the Museum's distinguished guests shared their thought and experience of man's perpetual aspiration toward the improvement of his surroundings.

In publishing these addresses to a wider audience, the Museum gratefully renews its thanks to these speakers, whose generous participation in the sixtieth anniversary celebration was an indispensable element in its success.

To round out the record of the anniversary, the *Chronicle* adds a backward glance, into the recent past, for the benefit of those to follow who may be interested in the record of the Museum's evolution.

SIX DECADES

Remarks by Mr. Richard F. Bach

Chairman, The Advisory Council

Ladies and Gentlemen: Recently I was on a long-distance train, running parallel to a roadway, going at reduced speed because of track repairs. At an opening in a nice white fence, behind which there was a nice white church, I noticed a bulletin board; it was big enough for me to read some of its announcements from the car window. At the top in large letters was the title of the next Sunday's sermon: "Do you know what Hell is?" At the bottom of the sign, in the same size rubber-stamped letters, was another message: "Come and hear our new organist." If you will accept me on the same terms, simply changing 'organist' to 'chairman', I will try to compete with the non-acoustic interior in which you sit and of which you are the victims because you are so numerous. (Thank goodness for that.) I am also told that a chairman had better say his piece at the beginning, because there will be no chance at the end.

Like so many of us, I find myself at this anniversary gathering, doing something that I could not have foreseen, yet something that now seems most natural. Even before I knew this Museum, founded by the grand-daughters of Peter Cooper, I had the pleasure of knowing the ladies themselves. And so I knew how natural it was that their unusual combination of qualities — knowledge, taste, flair for the beautiful, zeal for the thoroughly practical — should have led them to add to their grandfather's educational institution one more very instructive division.

From its inception this Museum, a pioneer in its field, has followed the paths marked out by its founders, a path included in Peter Cooper's own plans for this unique institution which he founded. As the grandfather wrote: "I desire to make this institution contribute in every way to aid the efforts of youth to acquire useful knowledge, to find and fill that place in the community where their capacity and talents can be usefully employed with the greatest possible advantage to themselves and to the community in which they live." It is also of interest to recall that in 1859, in the same Letter Accompanying the Trust Deed, Peter Cooper proposed to display, around the gallery above this Library where you sit, collections of "the works of art, science and nature." The balcony disappeared with the flooring-over of the open space of this room; and the Museum, no longer a gallery onlooker of the Library, stands in its own parterre. I have been told, on good authority, that before the view was thus interrupted a Romeo of the Library staff successfully wooed and won a Juliet of the Museum. However, I honestly believe the flooring-over was not designed primarily to set impassable obstacles in the way of such interdivisional romance. There is still the stairway; the Fire Department insisted on that.

When I spoke of thoroughly practical aims of the Museum I was thinking of services it offers to members of the public whose interests in work or in study lie in the arts of design. The day has long since departed when copying of stylistically pure design motives could be considered adequate to meet the needs of contemporary society. Although refinements of classical orders of architecture no longer limit the design vocabulary of today's architects, it seems clear that design in its broad lines of development today, and as already promised for tomorrow, finds its main hope in the harmonies of form, mass, line, color, that have been sung from time to time in the history of design.

Mr. Hathaway once told me of a pleasant occasion when he was showing the Museum collections to the Franco-Swiss architect Le Corbusier, then paying his first visit to our country. The distinguished visitor, confronted with a gallery in which were displayed a hundred French architectural drawings of the eighteenth century, nodded sagely, saying: "C'est bon. I am glad you have these drawings, for your students' sake. You know, I cut my teeth on such designs." Since Corbusier would rarely admit that he had cut his teeth on anything, this remark in itself was a grand admission.

Beside this I place a statement by another gentleman, whose name and work you know well, namely Charles Kettering — of General Motors. He works wonders in another field of design. Quite simply, and it applies here directly, Mr. Kettering said: "Research is a high-hat word that scares a lot of people. It needn't; it's rather simple. Essentially, it is nothing but a state of mind, a friendly and welcoming attitude toward change. In the automobile industry, of all places, you don't need to emphasize change. You go out to *look for* change, instead of *waiting* for it to come. Research, for practical men, is an effort to do things better, and not to be caught asleep at the switch. The research state of mind can apply to anything: personal affairs or any kind of business, big or little. It is the problem-solving mind as contrasted with the let-well-enough-alone mind. It is the composer mind instead of the fiddler mind. It is the 'tomorrow' mind instead of the 'yesterday' mind." How well this fits our Museum here.

Collections — not overwhelming in size, but collections of good work of the past and of the present — must remain the primary element of the Museum's facilities. Collections need not be looked at only through plate glass; they can be seen close up, handled, spread out on tables and screens for close study. It is as a working tool that the Cooper Union Museum primarily functions, rather than a gallery for the casual viewer.

In this connection may I refer to statements by James Laver, in his fine book *Taste and Fashion,* which will touch a good many of you very closely. While the book limits itself to costume, Mr. Laver's comments could apply to all other forms of design that so many of you favor and practice. He comments that the design of a costume, depending on its age — let us say, ten or even five years before it is actually due in the development of current design — might be called shameless. Next, about a year or two before it matures, the word will be, daring or outré. Finally it arrives at the high point where women will clamor for it and it will be classed as really smart. But bear in mind, someone had to start this sequence ten years earlier. Then, a year after its stagefront fashion spell, and when the magazines write it up in retrospect, while guessing at the future, they will describe it as dowdy. Ten years after, the word is ridiculous; and then twenty years later, hideous. Thirty years after its cue date, the comment will be: How amusing. But fifty years later: You know, that's really quaint. Seventy-five years later: Why, how charming. At the century mark: You know, that's really romantic, isn't it! Finally one hundred and fifty years later, it is in a museum and we can safely call it beautiful!

Wasn't it beautiful all the time? Or did the viewers change too? Did it cease to be a document later on? It must have been a document to start with. These are among the things museum collections can reveal.

You will see this evening a select exhibition that shows the kinds of *material* accumulated in the Museum's collections. You will also see the *facilities* provided for work and study by visiting consultants, whether students, independent designers, industrial designers, or others making practical use — workaday, earning use — of those collections and always available staff services. The exhibition itself is an example of another of the Museum's services, its program of changing special exhibitions devoted to the presentation of diversified themes, of media, of techniques, of chronological development.

We deal here with the realization of a hope, indeed a creed, and certainly an achievement. This Museum has reached the age of sixty. Its usefulness to design and designers grows, not only as a copybook or collection of formulae, but rather as a source of ideas, an inspiration toward new forms, new uses. We may compare the collections to a spring; we know its source, flow, strength, and above all, its beauty; but its course and direction must be controlled. The spring of inspiration in the Museum's collections, however strong, does not wash away the sediment of history, for this is the fertilizer of the present in which new plants of the imagination may grow for the future to enjoy. There is no final stopping-point; there are a few express stations but there are many more local stopovers in this development.

If I tell you things you already know, and certainly you do know them, I need not ask you to forgive me. We are together here in a common cause. You will agree also, I am sure, that an anniversary is a time to review past and present achievements as a basis for forecasting others now taking shape. Everyone wants to know what comes next; and it is frequently possible to venture a shrewd guess about the coming developments when one knows a little of those that have already taken place.

The situation of this Museum has steadily improved since that day, sixty years ago, when it occupied a small portion of the fourth floor above us here. Enlarged facilities have permitted it to serve a steadily increasing range of designers, students and members of the public. There remain, to be sure, large segments of our potential audience that we have not yet discovered, or who have not of themselves become aware that museums are as useful and as directly usable as libraries. Our recent successes through special exhibitions, no less than through the good report of the growing number of those who find our collections and services valuable in their daily activities, encourages a belief that the panorama of design available in this informal and close-knit Museum has yet to find its full measure of usefulness.

Until a free society is replaced by an aggregation of consumers whose purchasing power is channelled in obedience to rules of artificial obsolescence, until seasonal whim replaces studied design, until mankind is no longer sensitive to the essential qualities of form and all the subtle and delightful variations of shape and color that are a joy to eye and mind — until this happens, we may readily predict that a museum devoted to elucidation of these qualities and these values will always find plenty to do, and will continue to find such friends as you, in this audience, to lend your help and encouragement.

We come now to the real weight of our program, and as two foundation stones for this I would mention two quotations from old friends of mine: Schiller and Emerson. "The artist," says Schiller, "is the son of his time, but pity him if he is its pupil or even its favorite." Think that over; it might well be lettered on the walls of this Museum. And Emerson says: "We cannot overstate our debt to the past, but the moment has the supreme claim. The past is for us, but the sole terms on which it can become ours are in subordination to the present. Only an inventor knows how to borrow, and every man is, or should be, an inventor. The divine gift is ever the instant life which receives, and uses, and creates, and can well bury the old in the omnipotency with which Nature decomposes all her harvest for recomposition." These are potent thoughts for all who love the arts of design.

THE MUSEUM AND THE COMMUNITY

An Address by Mr. August Heckscher

Director, The Twentieth Century Fund

Mr. Bach, Mr. Hathaway, Mr. Houghton, Friends of The Cooper Union and the Cooper Union Museum: May I say first of all what a pleasure it is to have been invited to participate in the celebration of this anniversary tonight? A sixtieth anniversary is, from every point of view, a delightful one to take part in and to mark — a long enough period of time in human existence, full of incident and memorable events, and yet not so awe-inspiring, you will observe, as to reduce your speakers to silence.

I was reading the other day in a fine book which has just been published, setting forth the conservation activities of John D. Rockefeller, Jr., the description of some of the old redwoods; and I was reminded how these great trees have carried right down to their death the marks of droughts and tempests that fell upon the land thousands — yes, actually thousands — of years ago, before even the Indians, so far as we know, roamed our western forests. It seems that one of these trees, which time and scars brought low at the opening of the First World War, had actually been a sapling when Justinian II ruled the Roman Empire. It had been a young tree, as such trees grow, when the Normans invaded England. It had been at the height of its power when Columbus discovered America; and finally sank into its stalwart old age as our own Civil War was fought.

What sombre thoughts on human life and destiny could be stirred by such an existence, such a duration, as that! But here, by contrast, we have an institution of which people now living can remember the earliest days. There are persons in this room who knew the two Miss Hewitts; who knew, I suppose, Mr. Abram Hewitt, their father. They can look back over the years and fill the time between with familiar faces and familiar voices. You can celebrate an event such as this as you would that of a still youthful friend, looking forward to many hopeful and profitable birthdays to come.

It is indeed my function, being connected as I am with the Twentieth Century Fund, to look somewhat forward, to see this Museum in the light of the contemporary world and the world that is soon to develop. Yet I think it is worth while to note that from the beginning this Cooper Union Museum had been known as a modern museum; it prided itself in being part of the contemporaneous time, part of the present and indeed part of the unfolding future. Reading the original description which Peter Cooper made in that extraordinary letter which accompanied his Deed of Trust, one is struck, it is true, by the somewhat old-fashioned air in which he laid out the plan of the Museum, saying that there should be books here and paintings there, and that upstairs in the windows there should be cosmoramas for those who were not able to travel around the world. Peter Cooper's immediate aim for the Museum was not, however, fulfilled. It was some years later that his granddaughters, the two Hewitt girls, started the work. Much had happened by that time; and the granddaughters could claim proudly that they were in fact founding a "modern museum."

By the end of the nineteenth century, there was a wide confusion of taste; there was an awkwardness about many of the things of daily life. The Crystal Palace, the great exhibit which had inspired Abram Hewitt in the beginning, had dissipated its influence. A few craftsmen like William Morris had of course brought forth things that were supremely beautiful; but for the most part the objects of that day, the possessions that aspired to be beautiful, succeeded merely in being self-conscious and "arty." The craftsman, one might say, was undisciplined, and the machine was uncontrolled. In 1903, a few years after the founding of this Museum, the famous critic, Arthur Symons, was visiting the seventh exhibition at the New Gallery in London. That was an exhibit, I suppose, comparable to the "Good Design" which our sister institution, the Museum of Modern Art, puts on from time to time uptown. Arthur Symons was shocked by what he saw there. "My eye," he said, "was distracted by a mingling of what was tawdry with what was trivial . . . Everything was dead, and had a dull glitter, like the scales of a dead fish. Human figures, grimacing in an unearthly way, stared at me from the walls . . . Spiders' webs, and chains in which finikin stones were meshed, trailed across the interior of glass cases among spectral rings and lurid enamels. I was in the midst of a tangle of crawling and stunted and desperately self-assertive things."

That was the atmosphere of the period. One thinks, too, of Miss Eleanor Hewitt, in that fascinating paper which she delivered in 1919 before the Wednesday Afternoon Club here in New York, describing the level of artistry which prevailed at the time of their establishment of this Museum. She describes "an appalling mechanical exhibit" at the American Institute on Third Avenue at 63rd Street where art, she says, was represented by a female figure modelled in butter by a woman sculptress. I don't know exactly why the fact that it had been modelled by a woman sculptress should have so dismayed her. I think a female form modelled in butter by a man sculptor would have been almost as bad.

Well it was, ladies and gentlemen, at such a moment that the two Hewitt sisters started their collection of things which were to grow into this Museum: objects, as they conceived them, which had attained beauty and use together.

They were objects, in Arthur Symons's phrase, which give us a sense of satisfaction because they have in them "a quiet, undefeatable existence as beautiful things, made for use and perfectly adapted to their use, but with that beauty which is as a sort of soul in the body."

Later this evening, when we go upstairs, we will find objects in the collection which conform to the description — things which have an undefeatable existence, that have a beauty as a sort of soul in the body.

Now why was it that these two Hewitt sisters, who started a museum where the collections were supposed to end in the early nineteenth century, why was it that they gave to it the name and the description of a "modern museum?" Well, first of all, it was modern in the sense that it was a museum related to the community and serving the community, not only related to this area of the city where we are, but to the wider contemporaneous community, composed of all seekers of beauty, all faithful workers in good taste. Looking back across the history of museums we realize that they had their beginnings in the fifteenth century, an age like our own which saw the immense expansion of knowledge. Civilization had come suddenly upon two great discoveries, one in space and one in time: the discovery of this new world, America, on the one hand; the discovery of classical Greece and Rome on the other. It was then that the great collections started, that the museums as we know them had their birth.

But it is worth remembering that the museum in its origin was an aristocratic institution. The collections were made by the great and wealthy men of their time; they were the amusements of princes and the delights of peers. It was only the slow history of museums — like the slow history, for that matter, of every other institution in modern life — which saw them gradually democratized and brought into the service of the community as a whole. Now it was very definitely the idea of the Hewitt sisters that this Museum, in particular, should serve the community. They complained because other museums allowed only short hours when people could actually look at the collections. They complained because people had very often to go through elaborate ceremonies in order to have permission to enter into the museum and view its contents; even then they weren't able to handle them and to see them at first hand. So they wanted this to be the kind of museum which was open to students, which contributed to the enlightenment of a wide public, and lifted the whole level of popular taste.

The Museum was not only modern in that sense. It was modern also in its concept of the relationship between art and industry. Mr. Houghton, who is himself a supreme exemplar of the ability in our modern life to relate these two forces, art and industry, is going to talk presently and will have much more to say than I would possibly aspire to on this subject. Yet it seems worth while to recall that Peter Cooper in starting this institution prided himself on being known as "a mechanic of New York." His two granddaughters, in founding the Museum, said that they hoped to be remembered as "hereditary workers in the same tradition." They felt from the start that mechanics and beauty were not necessarily divorced and incompatible. The machine, as they conceived it, was not hostile to taste and excellence. In every age, men had had to make designs conform to the limitations of material, had to draw inspiration from the processes of workmanship and the techniques of manufacturing existing in their time.

Spending some time amid the collections here, one can see that if they were not imaginatively and creatively displayed and handled, they could seem merely an assortment of more or less obsolete things. You may remember Charles Lamb, when it was complained that his writing wasn't sufficiently in the style of the day, saying "Hang the age!" (And one can imagine that inimitable stutter.) "Ha-hang the age! I shall write for antiquity." It seems that many museum collectors, too, collect for antiquity; but the things which have been gathered here are animated by a different idea. The collections, as I understand them, are not to be studied merely as models; they have their own beauty yet are not to be slavishly copied. It is rather the way the old masters have solved *their* problems, the way they drew beauty from need, which provides the enduring lesson to those who come today to witness and watch.

Now it seems to me that this second lesson of the Museum, this relationship between the machine and art, is one that we have basically understood and to a very considerable degree mastered in our own time. All around us we see superb examples of machine-made beauty, beauty, to go back to Arthur Symons, not of artificial decoration, but beauty as a sort of soul in the body. We see it in our modern architecture, in our glassware, in the simple utensils of everyday living, in our textiles. Yet there are tendencies in our modern age which tend to falsify and to betray this promise which the machine stands ready to fulfill. We find in the present day that we can manufacture simple, inexpensive, well-designed things; and what do we do? We make them, too often, falsely different, and sentimentally ornate, and snobbishly elaborate. The machine can create beauty; but the question we need to ask ourselves is whether we have created a society which consistently and steadily seeks beauty.

Our society, it seems to me, wants and seeks instead the kind of car that will be different from last year's model at any price, and, if possible, longer and brighter; it wants household furniture and appliances that will match the advertisements, while the advertisements try to persuade us that last year's masterpiece has become this year's monstrosity. "Will you love me in

October as you do in May," the old song went, as I remember it; to which the modern consumer, under the compulsion of hidden persuaders, answers, "Certainly not."

There are, ladies and gentlemen, two ways of looking at things, of looking at possessions, and each of them has had a tradition and a life in this country's history. There have been those, embodying the ideas of the older world, who see possessions as ends in themselves, as things of beauty which are extensions of the inner personality, which reflect and enhance the individual who owns them. And then there is that other tradition, represented in America by the frontiersman, by those who exploited and settled this great continent. They looked upon things almost as enemies – to be subjugated and dominated and thrown away. It was a tradition which measured a man by the magnitude of the objects which he had overcome and laid low.

Each of these traditions obviously has its dangers and its shortcomings. The old-world idea of looking at one's possessions as being somehow a part of oneself led too easily to covetousness and to materialism. The western frontier tradition tended to encourage the prodigality, the fearful wastefulness which we find running like a dark streak through the American story; and yet it did have at its best, also, it seems to me, a kind of fine unworldly disdain, as men pushed forward and let inanimate objects fall in front of them.

I say there is something in favor of each of these traditions; but what is in favor of this new way of dealing with things – valuing them not for their own sake, but valuing them because of the place which they give us in society, owning them and yet not owning them, acquiring them without joy today and disposing of them without love tomorrow? All of us are under the compulsion to consume and to consume; men buy a new car, for example, less because they really need it than because they think that if they don't buy it they somehow are going to be left behind. On a somewhat higher level they engage in what you might call the yearly ritual of the trade-in, in order to keep this whole economic system of ours going and to save it from slowing down.

This built-in obsolescence, this deliberately contrived impermanence, is it not, you may ask, a part of fashion – that fashion which Mr. Bach has just now described so eloquently and so wittily? Have not men and women always sought rapid change, and have they not loved the ephemeral and the mildly eccentric? Well, it seems to me that fashion has served a real purpose in societies marked by classes and by hierarchies. You can discern a continuous process, with the upper classes, in order to set themselves apart from the rest of society, reaching out toward some new way of dressing, some new way of furnishing their houses. Meanwhile, the lower classes have tried to imitate them, rising ever upward. To the extent that they have succeeded, the upper classes have had to go and devise something else that was more quixotic and more strange.

Now all of this was a game which was not only harmless, but which actually produced the kind of charming diversity which is illustrated in the collections of this Museum. Yet America, I would remind you, is not a society of classes. The processes by which a small group sets itself apart have no comparable meaning here. Instead of fashions we are more likely to have fads; and these do not evolve organically out of a small group, out of an elite which has a tradition of taste and an understanding of excellence. These fads tend, rather, to be imposed by the so-called taste-makers, by market researchers, by the public relations men.

I spoke just now of "hidden persuaders." Some of you may have read the book of that title, which is a description of the research which has been going on to find out how the consumer can be influenced without his being aware of it, how the message of the public relations man can pass into the subconscious without actually going through the conscious mind at all — how the housewife, for example, can be put into a kind of trance, so that she will be more susceptible in the supermarket to "impulse buying." And all this, I might remind you, does not end with the consumer. It extends, inevitably, into the field of politics, where a free and sovereign mind has up until now been the basis of every valid philosophy of democracy.

We are, I think, in an age which can well be called the Age of Leisure. Individuals will surely agree with that description, though each may perhaps say: "Where is *my* leisure?" The housewife asks, where is her leisure, and the doctor asks where is his? My three boys complain they have to work all the time. Yet if you look around you realize, I think, that free time has been offered to our society, not only in the working day but in the whole life span, with people entering later into the working force, retiring sooner and living longer — that free time has been offered to us in an abundance which no advanced society has ever before dreamed of. Now this very leisure, it seems to me, is one of the forces which is contributing to the tendency to judge things not by their intrinsic beauty, to design them not with an eye to their natural fitness, but to see them rather as badges of belonging, as symbols of acceptance, which somehow mark our place in society and give us a kind of security which otherwise we could not have.

The values of our society are changing. The job that a man has seems less and less to be the thing which gives him his secure place, from which he derives his deeper satisfactions. He begins to seek those satisfactions, and that sense of being one with the group where he feels at home, through what he does in his leisure time — through the clothes he wears, through the kind of car that he drives, through all the superficial manifestations of his life. The groups to which men and women are seeking somewhat desperately, somewhat pathetically, to find an entrance are not the settled, traditional guilds and classes of older societies. They are groups which might be described as deciduous; they are continually losing their members like leaves, and continually shifting amid the complexity and the diversity of American life. The passion to belong has left a kind of nervousness, a sort of apprehension, which reveals itself in people of uneasy spirits, and in products which are as bizarrely designed as some of our modern automobiles.

And so, my friends, I come back to this Museum: small it may seem, but it is an affirmation, nevertheless, of the will to see beauty in things for their own sake, not bowing down to them as idols, but recognizing that every work which makes creative use of its materials, fitting itself imaginatively to the living needs of men and women, is in itself an expression of the spirit. It is not in conflict with the human quality, but it supplements and fulfills it. Here is assembled the evidence of what good workmen have done in their time. In that example shall we not, during the years and the decades ahead, find the inspiration that can keep us sane, and enable us to attain the promise of our civilization — the magnificent promise which we have made before the world and which we dare not now betray!

THE FUNCTION OF MUSEUMS IN IMPROVING MAN'S ENVIRONMENT

An Address by Mr. Arthur A. Houghton, Jr.

Trustee, The Cooper Union
President, Steuben Glass, Inc.

Mr. Bach and Mr. Heckscher, friends of Cooper Union: In a few minutes you will go upstairs to the Museum of The Cooper Union, to see a display of its material that has been arranged for this sixtieth anniversary. I shall try not to delay you too long.

The Cooper Union Museum, and the other museums of our country, serve two great and yet not entirely unrelated purposes: to uplift, and to educate. Their collections can be used both for the purposes of personal, spiritual satisfaction, and for research to help inspire better design. It is of this latter purpose that I should like to speak.

The existence of museums could be fully justified were they to serve no purpose other than to afford us the joy and happiness and spiritual refreshment that we get from viewing their collections and their exhibitions. It is interesting to note that the increase in the amount of leisure time that has come to people through the shortening of the working week is not entirely spent in front of television sets, but is reflected in the greater public attendance at museums and art exhibitions. We can look at the records of such institutions as the Metropolitan Museum, the attendance at which has not only doubled but tripled and quadrupled in the last ten or fifteen years. And behind the scenes is operating an even more important function: the use of the museums by students and scholars and designers, by those people who design the visual aspects of our environment.

Since the Industrial Revolution, which began only a little over a century and a half ago, we have become a new society. The preponderance of our people live in cities, or in the vast suburban developments that surround them. In this metropolitan environment almost every object within our view was made by man. There are very few objects of nature — the flowers in florists' windows, and the trees and grass in the parks. Everything else that we see was made by man himself: buildings and their furnishings, the paving of streets, cables and conduits under the streets, automobiles, clothes, machines that do our work. Wherever we go we are surrounded by objects of our own creation.

Now in every object made by man there is present one, or both of two elements: the element of utility, to fulfill some need that man has; or the element of satisfaction, to give him a spiritual happiness; or a combination of both these elements. A clear example of the utilitarian element is machines and machine parts; we do not care how they look as long as they work. For our spiritual satisfaction we have the fine arts; in many ways useless, yet they give us much-needed spiritual satisfaction. But most articles that surround us, and most articles that we come in contact with in our homes and our lives, combine the attributes of both utility and satisfaction.

Now design, in my sense of the word, does not concern itself with the making of objects which contain only the element of utility (that is the job of the engineer); nor with objects which contain only the element of satisfaction (that is the job of the artist). But design, our industrial design, is concerned exclusively with the making of those objects which contain both elements. It is neither science nor art, but a combination of the two. It is a new study and technique which make it possible for modern industry to supply with its products the combined needs and desires of man.

We must recognize the fact that no longer does the individual man, nor the individual household, make the goods and products that it uses. The craftsman, with rare exceptions, has completely disappeared. Our forefathers knew how to use hammers and saws; they could make tables, stools, simple furniture; they could build their own houses; they could weave simple fabrics. We do not know how to do such things. (I even understand that there was a time when ladies made their own dresses and their own hats!) Our environment today is a composite of articles that are made by industry; and we as individuals play no part in designing those objects. That is entrusted to others. All we can do is to select those, provided that they give us the utility we want, that appeal to us most or, in many instances, are the least repulsive in appearance. We are dependent upon the maker and on his designers. We are surrounded by an environment that is mediocre. That is all it is or can be, because by definition the mediocre is the medium or middle of the range of taste. It is what the average person appreciates and wants. There is no reason however to be discouraged. It is possible to elevate the whole range of taste, so that the mediocre of the future will be at least the equivalent of the best today.

I am not trying to be idealistic or impractical, as I sincerely believe that the standard of taste is beginning to move upward. It is here that the museum is playing the important and vital role. In its collections and traditional exhibitions a museum can present examples of the best design of the past. In its current exhibitions it can present the best of the present. These examples are shown to millions of visitors, and are taken to tens of millions of other people through photographic reproductions in the great periodicals. By these exhibitions, directly and indirectly, the museum helps establish standards of taste of the highest quality. It encourages individuals to select goods and articles that are in good taste. It creates a demand for better design in our industrial society. As this demand increases, industry finds that good design is good business. Independent industrial design is already a flourishing profession, and with increasing rapidity the larger corporations, and the more enlightened ones, are employing trained designers and setting up their own design departments.

And where are these designers trained? At Cooper Union and its great sister institutions, such as Pratt Institute, Parsons School of Design, Rhode Island School of Design, the Chicago Academy of Fine Arts. They are trained in the design courses that are being added to the curricula of the leading schools and colleges throughout the country. What is their training? Basically it has two parts. One is the technique of design: how to use the pencil, how to use the brush, how to use color; how to use the tools of the profession of designing. The second part is the history of design, ancient and modern. For that the great reference material is in the research collections of the museums and in the libraries of the museums. The students combine their techniques with this knowledge of history until finally they are able to do original creative work. In other words, we are not asking them to copy old design, but simply to understand it, so that they are based in the history and tradition of great design. Then, with the knowledge of technique, and the knowledge of history and tradition, they are free to do the best of modern creative design.

During their work in the design schools, and later when they become associated with industry, the designers are introduced to, and become thoroughly acquainted with, the materials in which they will be working and the tools and processes which form and produce the products. The education of the designer can never stop. He must constantly, as a private individual, refresh his soul and re-examine his standards by returning to the museum and to its exhibitions. He must constantly, as a professional, do specialized design research by resorting to the museum and to its reference collections. The full hope for the better physical environment of mankind — because we are living in a man-made environment — rests in two related places: in the scientific laboratories, to develop better materials and processes and products; and in the design schools and museums, to educate the public, to educate the design student and to serve the professional designer with the vast repository of visual reference material.

Why a better designed environment? Man is a combination of the beast and the angel, and the whole history of the struggle of civilization is the effort of man to lift himself from the beast and bring out his noble nature. It is within our own choice, and our power, as to whether we shall be content to reside in a visual limbo, or to work toward an environment that is worthy of our higher selves. I hope that we shall come to realize that our museums are not mere collections of beautiful objects, but are powerful sources for a better life. Let us support them, in every sense of the word, to bring about an increase in our individual personal happiness and a betterment of the visual environment which surrounds us.

DEVELOPMENT OF THE MUSEUM, 1937-1957

The observance of an anniversary provides a most compelling opportunity for addressing thanks to one's forbears and one's fellow workers, without whom there would after all be nothing to celebrate. This sixtieth anniversary of the formal opening of the Cooper Union Museum is a particularly pleasant moment, for it provides an occasion for reviewing successful accomplishment and forecasting future measures of productive action. Twenty years ago, picking up the thread of the narrative at the point to which it had been carried in 1919 by Miss Eleanor Garnier Hewitt,[1] the *Chronicle* reported[2] on the Museum's history during the years from 1919 to 1937; and now is offered another chapter of the unfolding story.

While collections form the cornerstone of every museum, it is only by the use made of the collections that the success of a museum may be gauged. The past two decades, which have brought increased resources of staff and funds, have provided the Museum with many advantageous openings for the more vigorous exploitation of its possessions. The most conspicuous development has taken place in the program of temporary exhibitions.

Aided by the creation, in 1938, of facilities specifically designed for the purpose, the Museum has maintained a continuing series of special exhibitions in which have been analyzed and displayed a rewarding variety of techniques and media. These exhibitions have been based in large part on material in the Museum's possession, reënforced with loans from generous collectors, museums, and the designers and producers of our own day. The first of the series, *Baked Clay in the Service of Man,* stands out in memory alike as an effective trail-blazer and as an element in the festivities accompanying the installation, in 1938, of the present President, Dr. Edwin Sharp Burdell, the first administrative head to preside over all of the educational program of The Cooper Union.

Wallpaper was next treated, and then malleable metals; and the theme of "shells and decoration" was explored. The arrival of war, and consequent depletion of staff, required the suspension of large exhibitions, and the program was resumed only in 1947 with a show of embroidery. In the following year the major show, of contemporary glass, provided a revelation of beauty in subject and in display technique. And then the fitting-out of the 18th-century marionette theatre was the occasion for a display of puppets and marionettes. This exhibition was especially memorable for the series of performances on the marionette stage, which attracted and delighted audiences to the limit of the Museum's seating capacity.

Next, in the spring of 1950, was offered one of the most delightful of the series. "All That Glisters" presented objects of golden and glittering surface, whether woven with metallic threads in the tenth century or with the latest shining plastic fibers of the mid-twentieth, gilded by the ancient Egyptian metal-worker or by the leather-worker of today.

In the years immediately following, leather, masks, lacquer, and men's waistcoats were presented successively, each accompanied by interpretive catalogues that rank among the best of the Museum's publications; and in the spring of 1954 was held the most imposing show of this sequence, that of enamel from its earliest days to the present.

A year ago was presented the largest exhibition yet organized by the Museum. "Design by the Yard," in which for the first time in this country was traced the development of textile printing over eleven centuries. More than half of the exhibit was devoted to contemporary textiles printed for furnishings or apparel; and the high quality of the material shown was gratifying evidence of American leadership in this field.

For each of the larger exhibitions just reviewed the Museum has also organized three or four exhibitions of smaller scope; some have been undertaken in collaboration with instructors of the Cooper Union Art School, and others, of more generalized interest, have been circulated afterward throughout the United States. On two or three occasions, travelling exhibitions assembled in Europe for the American circuit have provided further means of developing themes related to the Museum's collections; and the last three seasons have seen a valuable further enlargement of the exhibitions program through displays organized in the Museum by coöperating groups of craftsmen: The New York Society of Ceramic Arts, The New York Guild of Handweavers and the New York Society of Craftsmen.

In addition to the growing range of subject-matter published in exhibition catalogues, the Museum has presented studies and surveys of its various collections in the *Chronicle* during these two decades, thus making significant data available to professional, industrial and educational consultants, and to inquirers from a distance. The Museum has extended its audience by other means, through a notable increase in loans of its possessions to exhibitions organized by outside agencies and through the preparation of travelling exhibitions: four of these are currently circulated by the School-Museum Program of the New York City Board of Education, while others have toured the United States, for varying lengths of time, under the auspices of the American Federation of Arts and of the Smithsonian Institution. Participation in trade shows — textile trades, home furnishings and even the flower show — has resulted in an increased awareness of the Museum's services, and has attracted an increased use of its facilities. Displays in its own show window, and in those of friendly business firms, have further extended the Museum's audience.

With the development of program through special exhibitions, the permanent displays of the Museum have not remained static. The rate of regeneration of installation has been somewhat slower than the seven-year cycle of renewal of the human body; but these two decades have witnessed a complete reinstallation of the Museum's display space, and a complete revision of lighting. Two departmental study rooms, for textiles and for drawings and prints, have been created through the acquisition of equipment specifically designed to meet Museum needs, and display facilities have likewise been improved by the provision of new display units for wallpaper, ceramics and glass, lace, and textiles. Cataloguing of the collections, inaugurated shortly before the fortieth anniversary of the Museum, has continued steadily, so that seven-tenths of the collections have received curatorial study, and more than half of the Museum's objects are now recorded on cards in the catalogue that has been designed for public consultation.

For dissemination of information, however, the Museum has not limited itself to the written — or typewritten — word. Lectures have been offered more frequently than was possible in earlier years; film programs have supplemented gallery talks; and "live performances" have been introduced through the demonstration of a variety of craft techniques. It has occasionally been possible, also, in recent years, to present Museum material in television broadcasts.

While these developments in program have been brought about, the collections that support them have likewise improved. During these past twenty years the number of objects in the Museum's collections has more than doubled — 80,000, as against 35,000 in 1937 — and their range has been strengthened and enriched. The majority of these acquisitions have been added through purchase, primarily with funds contributed by the Friends of the Museum. In 1938, for example, more than 8,000 drawings formerly part of the Piancastelli Collection (from which the Museum had acquired nearly 4,000 drawings in 1901) were purchased from the late Mrs. Edward D. Brandegee, of Boston, under most favorable terms. Again in 1948 a helpful owner permitted the Museum to select, from a much larger and mixed aggregation of drawings, several hundred designs, largely by Frederick Crace (1779-1859), for interiors of the Prince Regent's Royal Pavilion in Brighton. Earlier in the present year another fortunate purchase added to the collection of original designs over two hundred, in color, for textiles printed around 1800 by the Genevese firm of Fazy; this was a turning-point in the development of textile printing, and the designs are of great value alike for their high quality and for their amplification of the Museum's collection of such material.

Other drawings and designs acquired during these twenty years came in 1938 from the collection of Sarah Cooper Hewitt by bequest of her brother, Erskine Hewitt; and from the same source was received a quantity of prints, extending the existing representation of stage design and of decoration and ornament.

In the same year, the publication of a catalogue of wallpapers was a most productive reminder of the Museum's service in this field. Several friends responded at once with gifts of collections of paper salvaged from old houses, and the preëminence of the Museum's reference collection of wallpapers continues to be maintained through such support from American and European sources. Besides gift and purchase, exchanges have helped in obtaining from other museums old wallpapers that are not likely to be procurable in any other way.

Collectors in other fields have been equally generous, providing the Museum with some of the finest acquisitions of these two decades. The late Mrs. Morris Hawkes in 1945 gave a number of pieces of lace from her collections; Mrs. George Nichols had already given, several years earlier, a group of handsome examples of lace from the collection of her mother, Mrs. John Pierpont Morgan; further examples, from the collection of Mrs. Robert B. Noyes, were given by Mr. and Mrs. R. Keith Kane; and more recently Richard C. Greenleaf has given, in memory of his mother, Adeline Emma Greenleaf, a large collection of extraordinarily handsome laces of the great days of French lace-making.

The textile collection has likewise developed during these twenty years. One of the larger groups received is the series of samples of silks woven in Lyon for the American market at the order, and frequently from the designs, of the late Herman A. Elsberg; these provide a fine chart to the currents of design just before and just after the First World War. Another movement of textile history is represented in the group of printed textiles, largely French, of the late 18th and early 19th centuries, given by the firm of W. and J. Sloane; and a series of gifts of contemporary printed textiles, mostly American, has been greatly appreciated.

The purchase of individual pieces of textile fabrics has added elements of distinction to the existing representation of textile history past and in the making. Many of these have appeared in earlier issues of the *Chronicle;* and if one example were to be mentioned again here, as exemplifying the quality and importance of objects sought now for the Museum's collections, it would be the delightful late classical silk band which depicts men gathering grapes.[3]

Embroidery is now represented in the collections more strongly than it was in 1937. The collection of European and American samplers formed by Mrs. Henry E. Coe came by bequest in 1941; and a series of purchases has added first-rate examples of Chinese, Indian and European embroideries, many of which are of types previously lacking. Another category scantily represented, that of Greek Island embroideries, was strengthened through the gift by the Provident Securities Company of textiles collected by the late Mr. and Mrs. William H. Crocker, of Burlingame, California.

The ceramics collection of the Museum, besides receiving significant enrichment through the purchase of early Meissen pieces and contemporary American stoneware, has benefited during the past season from the great generosity with which Judge Irwin Untermyer gave, from his own collection, twelve Chelsea porcelain plates with "Hans Sloane" botanical decoration. Judge Untermyer has provided key pieces to other collections: a Queen Anne silver kettle on stand, a William and Mary armchair upholstered in needlepoint, a pair of English crystal glass girandoles; all of these are of highest quality, and superior to anything of their kinds previously in the Museum's possession.

The *Illustrated Survey* of the collections, an anniversary publication, illustrates the silver kettle given by Judge Untermyer, as well as several of the objects given in recent years by an exceptionally generous donor who prefers to remain unidentified. To this benefactor are due thanks for the Röntgen table and the Ballin candelbrum shown in the picture book, and for an infinite variety of other objects: furniture, ceramics, glass, metalwork, textiles, embroidery, and a fine representation of jewelry of the late 19th and early 20th centuries.

Another generous donor of recent years, though no longer within range of the Museum's gratitude, the late Leo Wallerstein, had presented to the Museum a collection of engravings and etchings otherwise unattainable. Engravings by Dürer and Altdorfer, Hans Sebald Beham and Israhel van Meckenem, woodcuts by Dürer, etchings by Rembrandt, all of excellent quality and condition, composed the bulk of Mr. Wallerstein's collections. The gift of Mr. and Mrs. Wallerstein has greatly increased the strength of the Museum's print collection.

These two decades, then, which have so changed the world around us, have also seen striking changes within the Cooper Union Museum: expansion and enrichment of collections, improvement of space, enlargement in sphere of activities, increase in services, clarification of objectives and strengthening of purpose.

There can be no doubt that the future will bring even greater changes in the setting of man's daily life, toward the improvement of which the Museum's effort is aimed; and formulation of plans for further development of the Museum must obviously take into account these changes — so far as they can be foreseen. Besides maintaining collections representative of the good design of today, yesterday and the day before that, a teaching and working organism such as the Cooper Union Museum should develop displays illustrative of the elements of design — form, color, texture, spatial relationships, illumination. These concepts, sometimes difficult to convey even experimentally in classroom and laboratory, still seem imperfectly understood by designers and producers of much that is offered in today's market. They are all aspects of that elusive ideal, *quality,* recognition of which is often described under the indefinable term, *taste.*

In the exposition and explanation of these fundamentals of design, and only in such interpretation, the Museum may hope to draw together the various strands of art-historical investigation, sociological lore, craft and mechanical techniques, skill in pattern designing; and through the alliance of these forces create a needed educational tool unlike any now in existence.

CALVIN S. HATHAWAY

NOTES:

[1] Hewitt, Eleanor G. *The Making of a Modern Museum,* New York, 1919, The Wednesday Afternoon Club.

[2] *Chronicle,* Vol. 1, No. 3, April 1937, p. 83-89.

[3] *Chronicle,* Vol. 2, No. 6, June 1954, p. [183].

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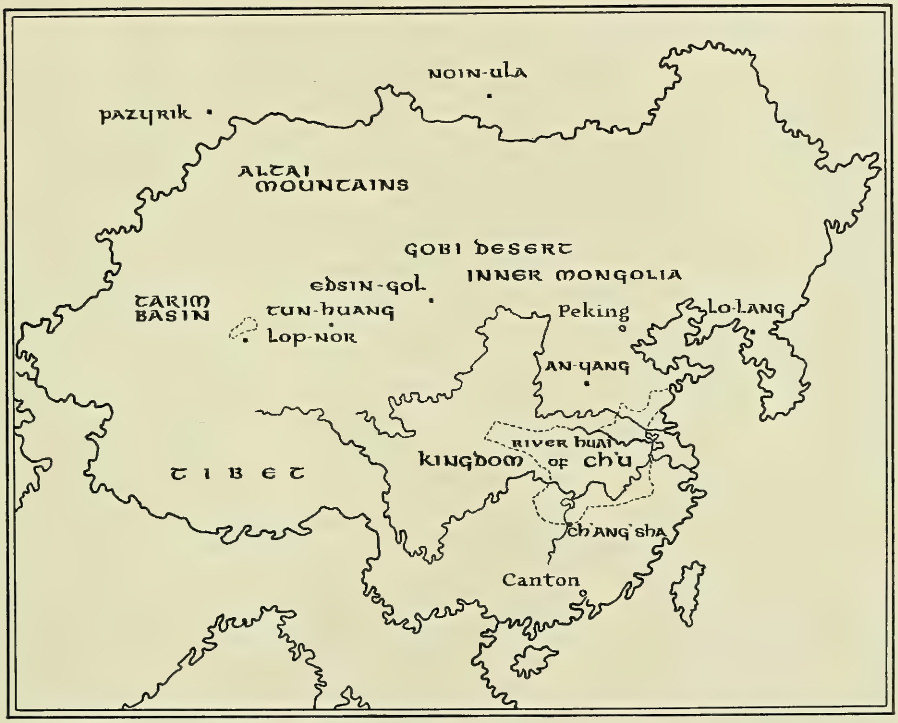
CHRONICLE OF THE MUSEUM FOR THE ARTS OF DECORATION OF THE COOPER UNION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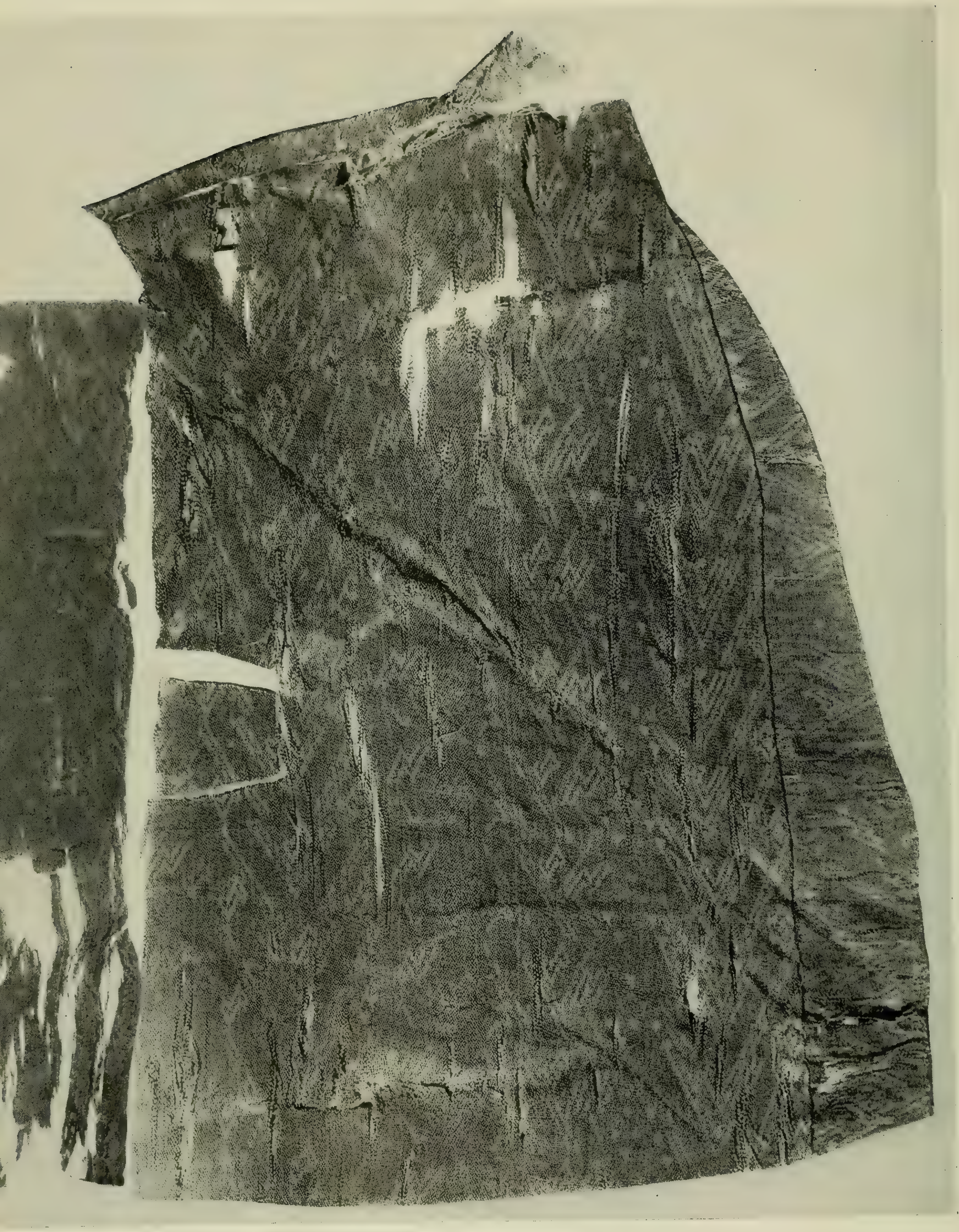
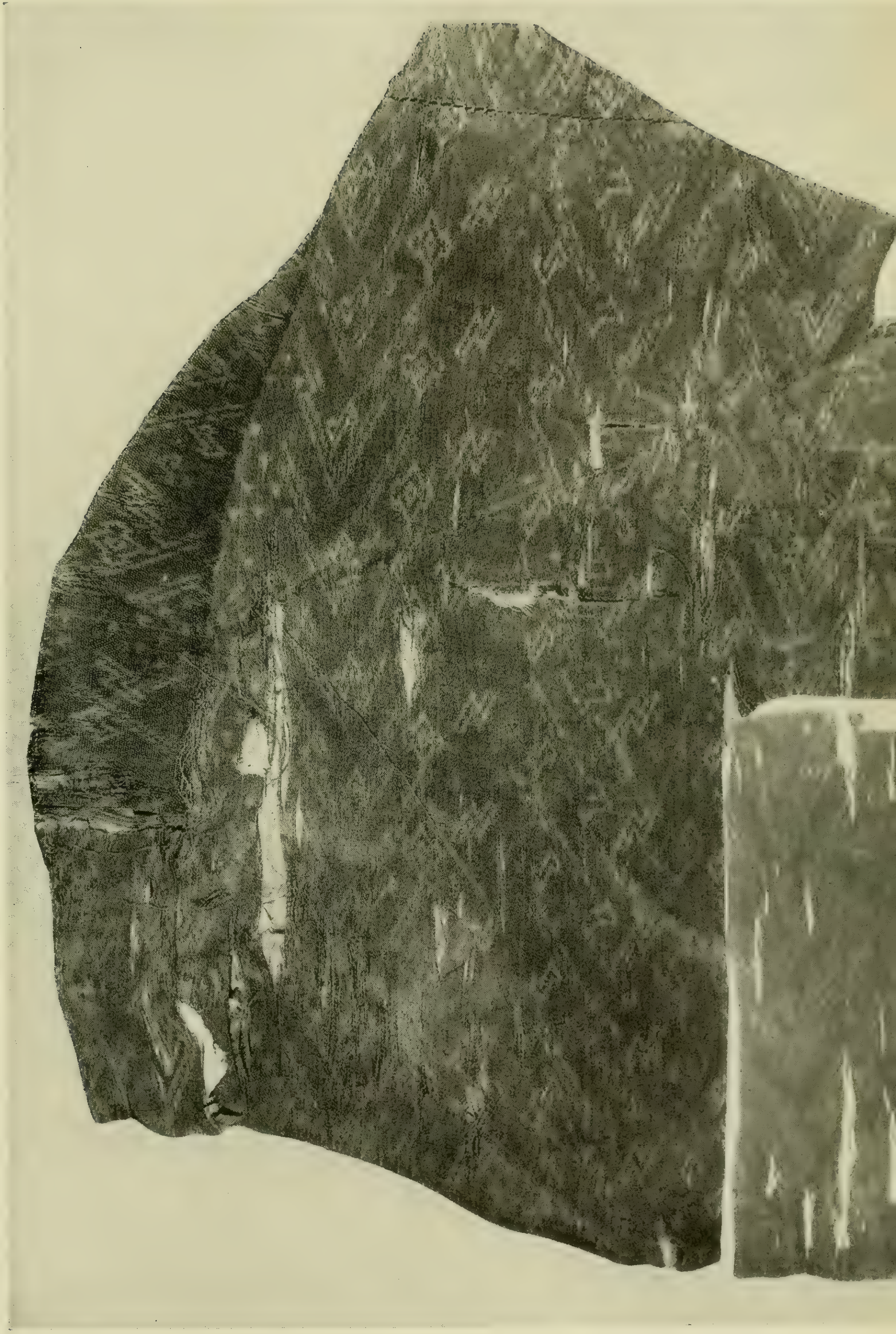




INSIDE THE FOLD:

Figure 1. Silk Bonnet, warp-patterned with geometrical motives in vermilion and honey-color on dark brown ground; here shown as it would appear if its main seam were opened and the bonnet spread flat. Height, in warp direction, about 22 cm. (8⅝ inches); 104-weft repeat averaging 2.4 cm. ($\frac{15}{16}$ inch); 126 to 150 warps per cm. (317 to 381 per inch); 50 wefts average per cm. (127 per inch); warp and weft untwisted. China, Late Eastern Chou period, probably third century B.C. Purchased, Au Panier Fleuri Fund; 1951-45-1.

The map on the cover was drawn by Mrs. Kathryn Dauber,
Cooper Union Art School, Class of 1959

CHRONICLE OF THE MUSEUM
FOR THE ARTS OF DECORATION
OF THE COOPER UNION

VOL · 2 · NO · 10 DECEMBER · 1958

A Bonnet and a Pair of Mitts from Chʻang-Sha[1]

THE GREAT GOOD FORTUNE of the Cooper Union Museum in acquiring the precious silk objects described in the following pages would scarcely have been conceivable when the Museum's textile collections were first begun. In consequence of the Chinese expeditions of Sven Hedin and Sir Aurel Stein at the end of the nineteenth century and the beginning of the twentieth, the world has begun to know far more about the early artistic production of China; further excavations in China, and more recent work of Chinese and Swedish scholars, have continued to add to our treasure of objects and of assured fact. While the present study represents but a minute fraction of the unfolding story of artistic achievement in China, and by unhappy necessity has been written without direct access to much material offering helpful and relevant comparisons, the importance of these acquisitions requires that they now be made known to a wider circle than those who have seen them displayed in the Cooper Union Museum.

Against the ever-increasing variety of fibres produced by man's ingenuity in this age of technology, silk still holds its own as the textile material supreme in luxury and beauty. Its long romantic history is inextricably linked with that of the country of its origin, China, whose civilized past extends for many centuries before the Christian era. Most of the early Chinese silk remains that have been discovered thus far have been fragments which survive from Han dynasty (206 B.C.-220 A.D.) sites outside of China proper, along trade routes or at military or colonial outposts. It is therefore with particular pride that the Cooper Union Museum regards its unique group of Chinese silk costume accessories — fascinating, puzzling, wonderfully woven, and beautiful even in their present diminished state — which, despite the existence of no comparable objects, may eventually be proved to

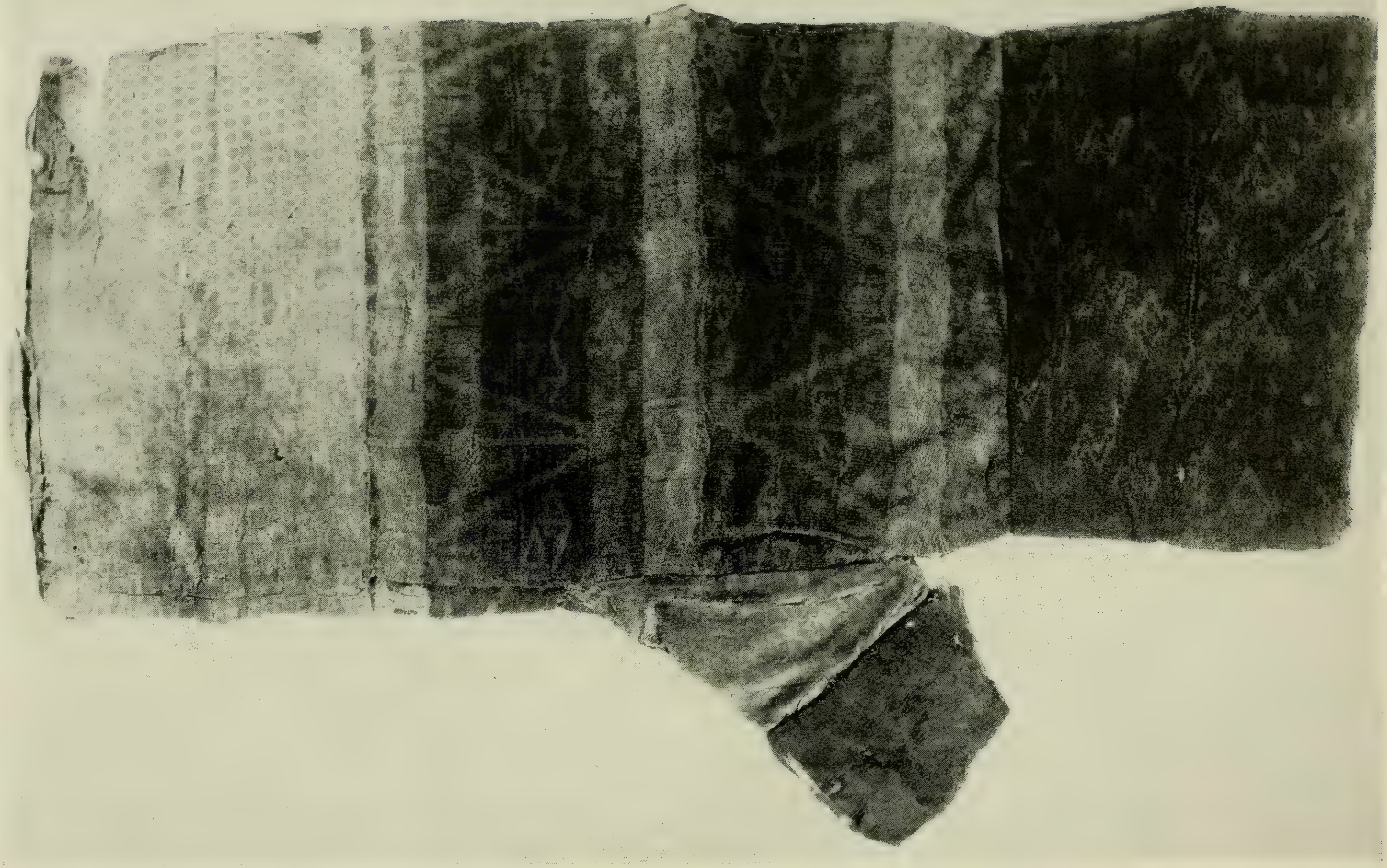


Figure 2. Palm face of one of two mitts each composed of two warp-patterned and two tabby silks; the lozenge-patterned silk about the palm and back in vermilion, honey-color, reddish-brown and dark brown; the silk encircling the fingers in vermilion, canary yellow, blackish-brown and black; the tabby of the thumbs in fawn-color and blackish-brown; wristbands and lining in fawn-color tabby. Length, 21 cm. (8¼ inches). Lozenge-patterned silk: 176-weft repeat (including turnover in warp direction), averaging 4 cm. ($1\frac{9}{16}$ inches); 120 warps, 48 wefts, per cm. (305 warps, 122 wefts, per inch). Silk about fingers: 120-weft repeat averaging 2.5 cm. ($\frac{31}{32}$ inches); 180 warps, 56 wefts, per cm. (457 warps, 142 wefts, per inch); all untwisted. The warps of the patterned silks run the short dimension of the mitts. China, Late Eastern Chou period, probably third century B.C. Purchased, Au Panier Fleuri Fund; 1951-45-4.

antedate the Han finds by one and possibly two centuries and which come from a site within the borders of China (see outline map on front cover of this *Chronicle*). These are a bonnet (Fig. 1), a pair of mitts (Fig. 2), and the larger part of a hemmed silk square of kerchief size,[2] found in a handsomely decorated lacquer toilet-box[3] (Fig. 3) excavated at Ch'ang-sha, in Hunan province.

Ch'ang-sha, today the capital of the province and one of the most important industrial and mining centres of China, was one of the great cities and occasionally the capital of the Ch'u Kingdom, which dominated and extended over much of south-central China during the latter part of the Late Eastern Chou period, known also as the period of the Warring States (481-221 B.C.). In the mingling of myth and occasionally verifiable facts in Chinese writings, the Ch'u Kingdom is pictured as a sophisticated and cultivated civilization, no less than as a strong political unit in feudal China. Twentieth-century excavations in this area by engineers and archaeologists, which have yielded a rich hoard of painted lacquers, bronzes, and wood sculptures as well as a small group of textiles, have established the authenticity of the picture of Ch'u civilization suggested by the traditional recorded accounts of the Chinese. Not all of the material recovered from the territory of the Ch'u Kingdom, however, comes from sites that can be attributed to the period of the Warring States; and, further, the uncontrolled conditions under which many of the excavations were carried out often preclude the positive identification of the places where many pieces now in western museums and collections were uncovered. This lack of precise information is particularly troublesome in dealing with Ch'ang-sha finds, where the tombs date from the Late Eastern Chou epoch through the Han period and up to early Ming times, in the 14th century of our epoch.[4] And since it is probable that the brilliant artistic traditions of the Ch'u culture in the Ch'ang-sha area in the Warring States period continued to influence art forms produced in this region long after the Ch'u Kingdom became part of the Chinese Empire, in about 221 B.C., it is extremely difficult to attempt to establish a hard and fast line of demarcation between the Ch'u stylistic repertory of the Late Eastern Chou period and that of the Han period. Yet, despite this difficulty, the dating of the Cooper Union silks can rest only on a study of stylistic evidence, for their weaving techniques were used in China over several centuries and some of their motives had an even longer life-span. The following pages offer tentative explorations of the possibility that in these remarkable pieces from Ch'ang-sha we possess creations of the Late Eastern Chou period.

In many of its expressions, the brilliant inventiveness of Ch'u craftsmen, which is affirmed by recent discoveries in the old Ch'u kingdom area, was

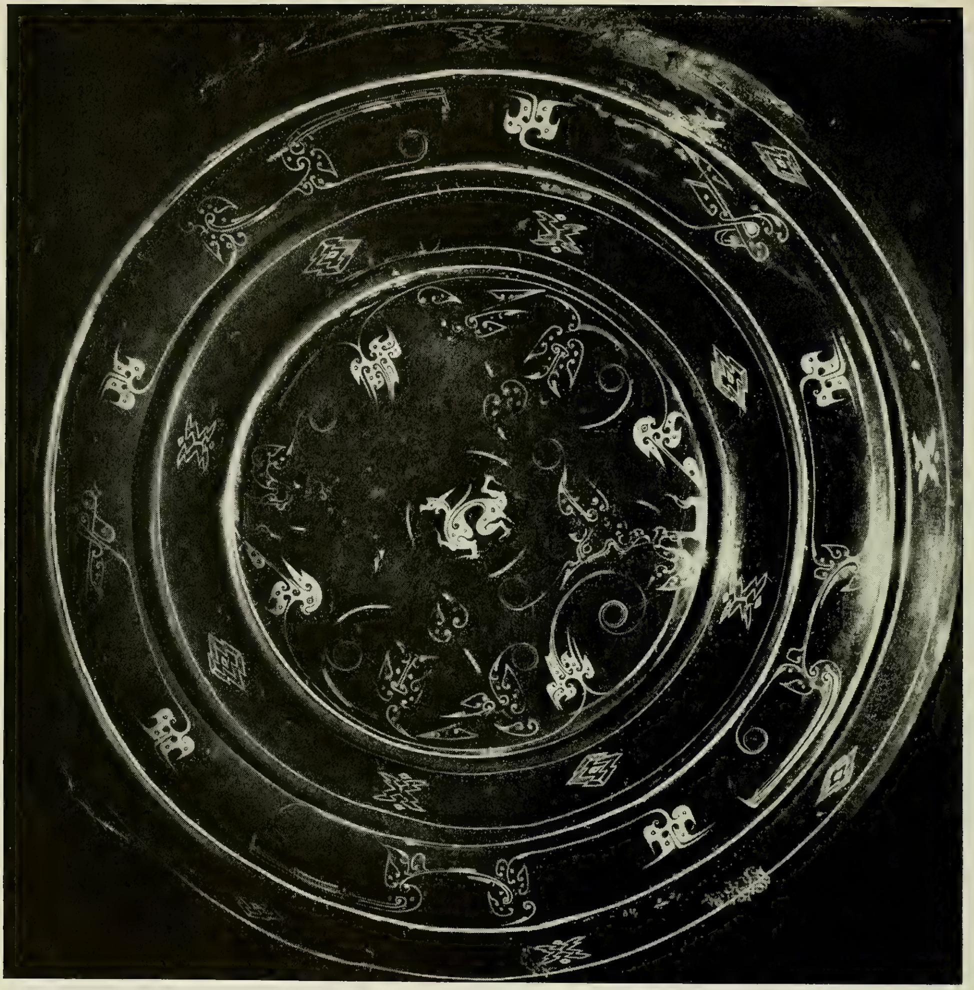


Figure 3. Lacquer box (*lien*) in which the bonnet and mitts are said to have been found at Ch'ang-sha. Shades of vermilion with faint touches of dark green on black ground. Diameter, about 28 cm. (11 inches). Collection of Dr. Paul Singer, Summit, New Jersey.

deeply rooted in traditions that were already centuries old. In the 14th century, B.C., the Shang people, of northern neolithic stock, had their capital at Anyang in Honan province. The highly developed Bronze Age civilization of these people is evidenced by magnificent cast bronze ritual vessels, exquisitely carved jade, alabaster, and marble pieces, and numerous bones with incised inscriptions that consult the gods about the various crises of human life. The character for *silk* is believed to be present in the extensive vocabulary that has been compiled from these inscriptions, and bits of tabby and twill silk weaves have actually been found embedded in the patina of several bronzes excavated at Anyang.[5]

About 1122 B.C., by traditional dating,[6] the Chou tribes, probably originating from the same northern stock as did the Shang, infiltrated and finally dominated this much more developed civilization. The Chou people, who had no system of writing until they adopted Shang culture, were nevertheless a vigorous and intelligent race who quickly established an agricultural civilization organized on feudal lines and based on the assimilation of Shang tradition and ritual. Powerful feudal lords defeated the Early Western Chou emperor in 771 B.C., and the royal domain became weaker and smaller than the holdings of the increasingly aggressive lords. Among these feudal states was the Kingdom of Ch'u, long regarded by its contemporaries as a tribe of southern barbarians, of a different racial group and outside the fold of Chinese culture, and of constantly growing political power. When the ruler of the Ch'in state in northwest China finally succeeded in welding all of the Late Eastern Chou feudal kingdoms into a single unified empire nearly five hundred years later, toward the end of the third century B.C., the Ch'u kingdom had grown tremendously, its territory then embracing the present-day province of Hupei, parts of Hunan and Honan, and most of Anhui, in south-central China.

The cultivated civilization which had developed under the Ch'u rulers had produced famous philosophers and poets as well as the talented artists and craftsmen who created the brilliant array of artifacts that have lately been excavated in the area.[7] The semi-lengendary Lao-tzŭ, one of China's great philosophers, whose strange and appealing quietist form of mysticism is said to have taken root first in the Yangtze River valley, is traditionally associated with the Ch'u kingdom, and it was in this same valley that a famous school of nature poets grew up, whose surviving works were compiled by Han scholars under the title, *Elegies of Ch'u*. We read in these of a great Ch'u poet, the author of the "Heavenly Questionings," who, wandering in exile, saw in a Ch'u family shrine wall-paintings of "the gods and spirits of Heaven and Earth, and of the Mountains and Streams" so arresting that he asked about them in order to "dissipate his sorrowful thoughts."[8] Except for literary references of this sort, and for intimations furnished by the exquisite and accomplished brushwork of the lacquer decoration, little is known about the kind and quality of painting in Late Eastern Chou times, but the recent discovery at Ch'ang-sha of a lively and accomplished painting on silk of a woman with a fêng-huang (a phoenix-like bird) and dragon[9] suggests that the paintings which the Ch'u poet saw may well have been worthy of his excitement.

Sericulture and silk-weaving, which had become important adjuncts of Chinese civilization centuries before the Ch'u kingdom was established, have always figured importantly in Chinese literature. Ancient Chinese legends tell of Huang-ti, the third of the Five Legendary Emperors of China, and of his empress Lei Tsu, also known as Hsi-ling-shih, who, having observed the marvelous strength and silken splendor of the product spun by the silkworms in the palace gardens, devised a way of reeling the silk and taught her people how to use it. Weaving, dyeing, and the embroidering of birds and flowers all came, according to these legends, from her teaching.

Another legendary account stressing the importance of silk is to be found in the Book of History (*Shu Ching*), a history of varying authenticity compiled sometime after the Chou dynasty. In the well-known story of the feats of the hero-emperor Yü, the first Emperor of the Hsia dynasty (the traditional dates of which are 2205 B.C. to about 1766 B.C.), who reclaimed China after a great flood and in the process divided the country into nine provinces, are listed the characteristic products to be levied from each. From Yen-chow, for instance, came varnish and silk and "baskets . . . filled with woven ornamental fabrics"; from Ts'ing-chow, "the wild tribes of Lae . . . brought in their baskets the silk from the mountain mulberry"; from Ts'en-chow came "deep azure silks and other silken fabrics, chequered and pure white"; from King-chow "baskets were filled with deep azure and purple silken fabrics"; and from Yu-chow, "baskets filled with fine silken fabrics and floss silk."[10] The *Book of Rites* (*Li Chi*), an actual record of courtly tradition and etiquette kept through many centuries and compiled sometime after 600 A.D., contains an account of an empress of the third century, B.C. who, in the last month of each spring, after fasting and vigil, went into the eastern fields to tend the mulberry trees, accompanied by the wives and younger women of the palace. Her office was to apportion the cocoons and weigh out the silk which her ladies then wove and fashioned into robes for the great religious services. Toward the end of the Chou period, these services included sacrifices not only to ancient emperors and tutelary genii of the land, but also to the spirits of the ancient silkworms, the ancestors of those of the present.

The famous historian and astrologist of the second century, B.C., Ssŭ-ma Ch'ien, who, in his long history of earlier days, frequently used figures of speech from weaving and mulberry cultivation to illuminate even military matters, also set down many brief direct references to silk: as prepared by the women, as the garb of ritual and of nobility, as distributed by the Emperor at certain festivals to "orphans and abandoned ones," as forbidden to merchants in certain periods of reform, and so forth.[11]

But the voices that speak most warmly and authentically from these early times are those of the poets. In the *Book of Poetry* (*Shih Ching*), a Chou dynasty compilation of contemporary and earlier odes and lyrics, an unknown poet sings:

With the spring days the warmth begins
And the oriole utters its song.
The young women take their deep baskets,
And go along the small paths,
Looking for the tender (leaves of the) mulberry trees.
In the silk-worm month they strip the mulberry branches of their leaves,
And take their axes and hatchets,
To lop off those that are distant and high;
Only stripping the (young) trees of their leaves.
In the seventh month the shrike is heard;
In the eighth month they begin their spinning.
They make dark fabrics and yellow . . .[12]

Also from the *Book of Poetry,* though subject to the vagaries of Chinese commentaries and western translations, can be gathered many allusive and interesting details about the important roles which sericulture and weaving played in the daily lives of the Chou people. Each household had a plantation of mulberry and jujube trees and a field of long-fibred plants (probably hemp or ramie), as well as plantings which supplied deep blue, yellow, and red dyes. The women, whose special province it was to feed and tend the silkworms and cultivate the hemp, ramie, and plants used for dyeing, also reeled and wove the silk and spun and wove wool as well as the vegetable fibres. The household weaving was done on looms which had cylinders on which the warp was wound, the weft being carried in a shuttle. Each house was surrounded by a moat in which the hemp and ramie were steeped, this moat serving also at other times as a dyeing vat for all of the yarns used in weaving. The dyeing operation was a ceremonial affair that was carried out in the eighth moon (probably our September), after which the long evenings of autumn and winter were devoted to spinning and weaving the bright-colored fibres.[13]

These varied sources which provide ample evidence of the prominent roles of sericulture and silk-weaving in the life of ancient China also furnish a few sketchy details about early Chinese costume. We learn from Shang oracle-bone inscriptions, for instance, that clothing, long before the Chou period, was tailored of fabric and fur. Later, according to the *Book of Poetry,* Chou women of the ordinary class wore undyed garments with head-coverings of grey or pale blue. Although not specifically stated, it may be assumed that ladies of rank were permitted greater latitude in matters of dress, because one of the odes sharply criticizes the lavish gold and precious stones worn as hair and ear ornaments by one of these favored ladies, as well as her robe embroidered in varicolored silks.

Late Eastern Chou costume is visually recorded in a variety of dated or datable materials, though in a somewhat impressionistic fashion, in pottery tomb figures and small figural bronzes, in the decoration of bronze vessels, and in the lacquered wood figures excavated at Ch'ang-sha which are believed to be characteristic of this site in particular.[14] In these slender, charmingly stylized figures of men and women one can discern geometric and floral patterning on the long robes which have trailing sleeves and deep bands of contrasting fabric overlapping high at the neck. The women's headdresses and hair are so stylized that it is hard to make out distinguishing features beyond flat-topped heads with sleek painted hair or closely fitted head coverings with chin-straps or ties.[15] It is possible that the spirited figures represented on a lacquer *lien*[16] riding horseback are wearing bonnets with chin ties and a long streamer of undetermined nature flying backward from the crown. A similar head covering appears to be worn by the mulberry-leaf pickers in the decoration on a Late Chou bronze ritual *hu* (see Fig. 4).

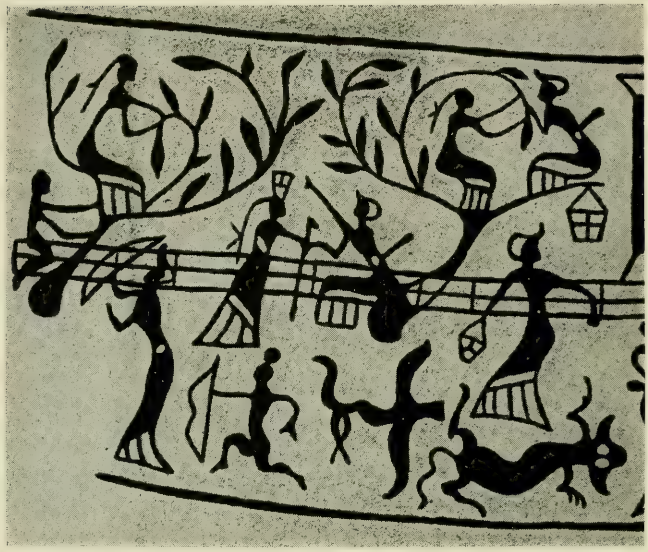
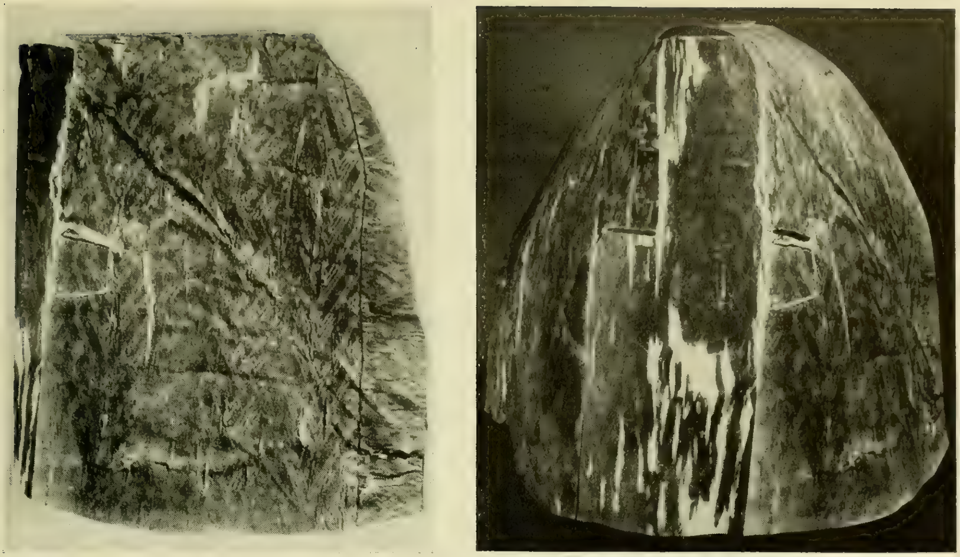


Figure 4. Detail from bronze *hu* showing women picking mulberry leaves; Late Eastern Chou period. Palace Collection, Peking. — Reproduced from The Art Bulletin, Vol. 36, no. 1, March 1954, Fig. 4a, between p. 12 and 13.



Figures 5, 6. Right side and back of a model of the bonnet composed of assembled photographs, showing the placing of the two upright strips, now detached, and the three slits, finished in buttonholing, of undetermined purpose. Because of the limitations of photographic paper, the top slit is here inaccurately recomposed; its lower edge was originally no longer than its upper edge. The bonnet ties are not shown.

These glimpses at women's fashions in the Late Eastern Chou period, derived and deduced from a variety of sources, provide a background to the study of the bonnet in the Museum's collection (Figs. 1, 5 and 6). Although a bonnet somewhat similar in style (but made of unpatterned silk tabby) and hemmed tabby squares were found in an early Han site at Edsen-gol by Folke Bergman,[17] none of the finds from this or any other Han, still less any pre-Han, site has, so far as we know, included handcoverings of any sort. The mitts (Fig. 2) in the Cooper Union Museum textile group which, happily, are intact and self-explanatory, are believed to be unique, since we have found no published reference to such objects. Accessories like these, and like the silk kerchief of which the Museum has six fragmentary squares, would have been utilitarian adjuncts of Chinese costume from earliest times, though we find no dating evidence for them as such in any of the early representations of Chinese dress.[18]

Preceding the detailed discussion of the patterns of the bonnet and mitt silks, the reader will wish to learn something of the structural features of these costume accessories. The body of the bonnet was formed of a single piece of warp-patterned silk that had been cut in a shallow *V* along its top edge, with a flaring notched opening cut further below the point of the *V;* the two sides of this shallow *V* have been brought together, leaving this notch as an open slit, and joined in a seam running from front to back at the top of the head – if one accepts the most likely position in which the bonnet would have been worn, in the manner of a hood, with the seam on the top of the head, and not of a sunbonnet, with the seam running down the back of the head. Deep turn-backs of this centre seam (open on the inside and covered by the lining) give a somewhat padded effect to the top of the bonnet. Slightly curved "cheekpieces" are joined to either side of the bonnet-front, their warp-direction (with the one exception noted below) at right angles to that of vertically-running warp in the body of the bonnet. The edges of the bonnet silk and of the unpatterned tabby ("plain weave") lining are turned under, toward each other, and the silk and the lining are whipped together with a form of buttonhole stitch in plied silk thread which now looks undyed. At the crown of the bonnet, that is to say, at the inner end of the centre seam is – or rather, was – a horizontal slit, 4.6 cm. ($1\frac{13}{16}$ inches) long, its top edge formed by the right and left sides of the notched opening as they rise to meet at the seam, and its lower edge formed by the top of the back of the bonnet. The buttonhole stitching with which this slit was finished is still to be seen along the two sides of the notched opening, running in warp direction, and in weft direction along the top edge of the back portion of the bonnet, now unfortunately separated from the body of the bonnet. About 7.7 cm. (3 inches) below this slit, to the right and left of the centre of the back of the bonnet, are horizontal slits, 3.2 cm. ($1\frac{1}{4}$ inches) long, similarly finished. Two upright strips of the bonnet silk had become detached before the Museum acquired the bonnet; the shorter, with its upper edge finished off in buttonhole stitching, supplies the lower edge of the left-hand slash; a second, longer strip fits in at the right of the first strip; its finished upper end, as already noted, constitutes the bottom edge of the slit at the crown of the bonnet. The mid-portion of this longer strip is lightly wadded, for 5.7 cm. ($2\frac{1}{4}$ inches), with matted undyed silk filaments. This wadded portion may have been designed to receive pins supporting ornaments, or even pinning the bonnet to the head; while the purpose of the slits is open to conjecture. They may have fitted around ornaments or combs set into the coiffure, or they may even have served to pass tresses or loops of hair, such as those found with the bonnet in the lacquer box, and in a number of other Ch'ang-sha burials. The bonnet ties, about 7.5 cm. (3 inches) wide, each double-twined or twined-plaited of slightly Z-twisted silk threads[19] to form self-edged and expandable strips (see Fig. 7), are, in their present state, about 24 cm. (9 inches) long. They are bunched at one end and tacked to the inside of the bonnet at the lower ends of the cheek-pieces.

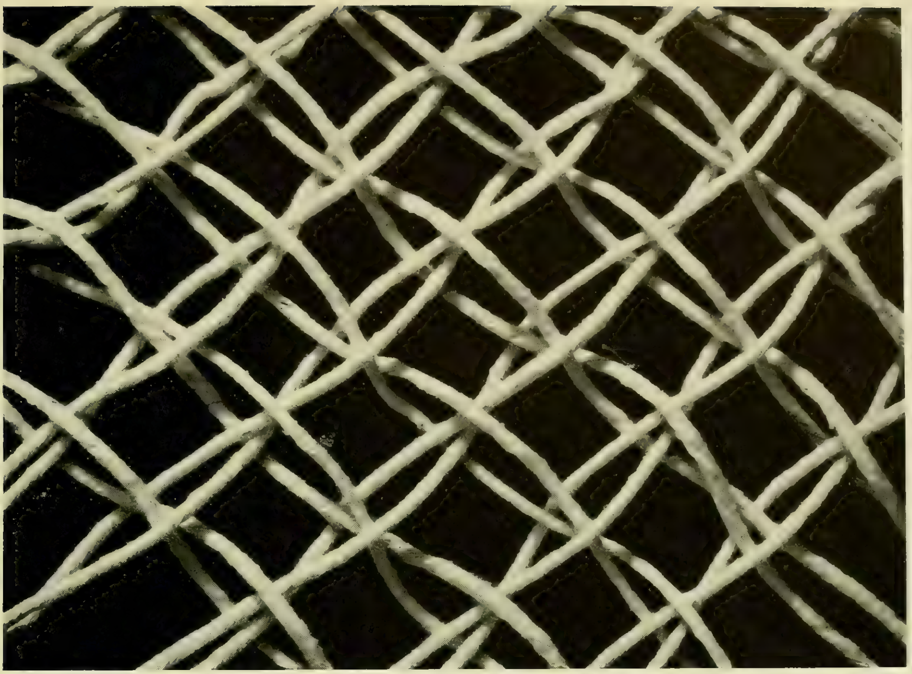


Figure 7. Reconstruction in string, by Miss Irene Emery, of the "double twining" or "twined plaiting" of the bonnet ties. Enlarged about 30 times the size of the ties.

The mitts were fashioned out of strips and irregularly-shaped pieces of two different warp-patterned silks, the cuffs and thumb-sections being made of unpatterned tabby, the open ends of the thumbs of dark brown tabby. They are lined with the same fine tabby, though no trace of the thin, dark brown buttonholing which joins a similar lining to the body of the bonnet can be discerned in these. The seams appear variously to be blind-stitched, lapped, or joined with running-stitch and opened on the inside.

The six small unpatterned squares of fine tabby, now a light fawn-color (Munsell color notation, 10 YR 8/3), which were acquired with the bonnet and mitts, are remains of a larger square that had lain folded for centuries on top of the other contents of the lacquer box.[20] When the box was found and opened, it was discovered that part of the kerchief had firmly adhered to the lacquer on the inside of the lid.[21] The position which each of these fragments occupied in the original square is to be seen from a study of their raw and finished edges, the latter being rolled and whipped with the same kind of long buttonhole stitch as was used on the bonnet. Although now worn and stained, these fragments in their sheerness remind us of the similarly diaphanous silks, first imported from China into Rome in the late years of the Republic, which offended the sense of propriety of Roman matrons accustomed to garments of heavier stuffs.[22]

The bonnet and mitts have a touchingly home-made aspect. All of the hidden seams appear to have been done in fine running stitches. Much neat but casual piecing is seen in both mitts and bonnet. The mitts were made of bands of two different warp-patterned silks — one around the fingers, and one around the palm and back of the hand — and a wristband of unpatterned tabby extending about one inch over the lozenge-patterned silk of the palm. All these parts show piecing, but especially noticeable is the horizontal piecing of several narrow strips to form the bands around the palm and back of each mitt, with no effort made to maintain the lozenge framework of the pattern of this silk. The actual pattern as originally woven may be seen in the drawing here reproduced as Fig. 9. Similar casual piecing exists in other parts of the mitts as well as in the bonnet. The bonnet piecing is to be noted especially to the left of the top seam and in one of the cheek-pieces, where a small section has been inserted in complete opposition to the warp-direction of the cheek-piece silk itself. The bonnet seams vary in width quite casually, too, and where the patterned silks and linings are turned under against each other to form finished edges, the turn-unders may vary from a quarter of an inch to well over an inch along the same edge; though neither here nor in the mitts are any selvages visible. These not-too-skillfully executed details add greatly to the intimacy and charm of the garments, which, in their entirety, seem to exemplify the kind of thrifty improvisation which from time immemorial has been practised by women everywhere.[23] Granting that the pattern motives possessed symbolic connotations, it is worth remarking that the maker of these costume pieces showed no restraint in her cutting and pieced with no apparent regard for the nature of the pattern; or possibly these silks had survived as fragments from generations before that of the maker.

Although our theory of a pre-Han date for these textiles must, in the final analysis, be justified from a study of the patterns of the silks themselves, we cannot leave out of account the evidence supplied by the lacquer box (Fig. 3) in which they were preserved. The establishment of a pre-Han date for the box would not, of course, prove that the textiles were contemporaneous, but it may certainly be regarded as valid supporting evidence; and there are reasons for believing the box itself to be of the Late Eastern Chou period.

At the time of its discovery the box was an extremely handsome example of painted lacquer which, though not now provably from the Ch'ang-sha site, was comparable in style and quality to the best of the Ch'ang-sha lacquers.[24] Since its removal from the damp tomb-chamber at Ch'ang-sha, where it is believed to have lain for centuries, the box has been gradually shrivelling as the Ch'ang-sha lacquers are likely to do if they are not kept under controlled humidification during the drying-out process. Fortunately, it was photographed before this deterioration had become serious enough to mar its beauty, thus providing us with a visual record of its style of decoration.

Very little confirmatory archaeological evidence has as yet been found in any of the early sites excavated at Ch'ang-sha, but a pre-Han date for most of the material discovered in the deep vertical tomb-chambers in this area is, in the opinion of many Far Eastern scholars, strongly supported by stylistic evidence. An invaluable source of reference for a study of the painted lacquer patterns is Professor Karlgren's detailed analysis of Huai and Han mirror pattern styles.[25] Karlgren's "C" and "D" mirror categories, in particular, which he attributes to the 4th and 3rd centuries B.C., show the same fluid grace and dynamic vitality of the animal forms, the same marvelously controlled arabesques as do many of the Ch'ang-sha lacquers.[26] If we accept Karlgren's dating chronology for the mirrors, and no one has seriously challenged it, a pre-Han date for lacquer patterns such as we see on this box seems highly probable.[27] Except in minor details, the pattern of the box does not provide any direct stylistic evidence for a contemporaneous date for the textiles found in it, but the presumable dating of the box itself lends weight to the theory of a pre-Han date for the textiles, a theory which a study of their patterns supports.

The pattern in the bonnet silk (Fig. 13, inside the back cover) and that in the end section of the mitts encircling the fingers (Fig. 8) are closely similar. Asymmetrically composed, with closely-set motives almost entirely geometrical, they give the all-over effect of a cascade of small, delicate shapes. The vertical repeats are short (average lengths, 2.4 cm. on the bonnet, 2.5 cm. on the mitt); the horizontal repeat too wide to be determined even in the bonnet width, of 33 cm. ($12^{15}/_{16}$ inches), which, like the mitt silk, possesses no visible selvages.[28] The bonnet silk is woven with warps of three colors: a dark brown (Munsell 10R 2.5/8) for the ground, and vermilion (Munsell 9R 4.6/9) and honey-color (Munsell 2.5YR 6.25/10) warps for the patterning. A still darker brown bordering on black supplies the ground color of the mitt silk about the fingers, patterning here being executed in the same vermilion and a clearer, almost canary, yellow (Munsell 3Y 6.5/6.5).

The largest and most striking motives on the two silks – though no longer fully visible, in consequence of discoloration, on the mitt silk – are freestanding paired chevrons, one, complete, inside the other, incomplete, arranged in equidistant vertical registers and flanked on either side by pairs

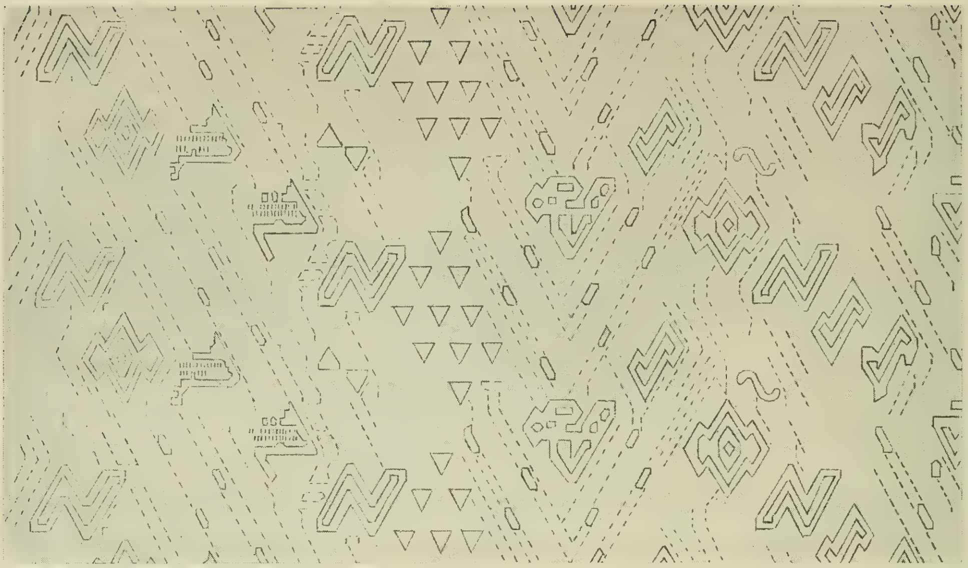


Figure 8. Design of warp-patterned silk in the portion of the mitts that encircles the fingers, giving the full sequence of pattern motives combined from two sections of the silk, to a total breadth of 8.1 cm. ($3\frac{3}{16}$ inches). Certain portions of the patterning are no longer active, because of discoloration of the warps that form them; these inert elements, recoverable through microscopic analysis of the patterning action of the now-blackened warps, are here shown in broken lines. The warp direction is vertical, in the direction of the pattern repeat. — Drawn by Miss Alice S. Erskine and Mrs. Kathryn Dauber.

of simple diagonals that lie parallel to the sides of the chevrons, additional registers of these paired diagonals being carried independently up through the geometric motives set in the spaces between the chevrons. The arms of the chevrons, as well as the simple diagonals, though rendered in Fig. 13 as pairs of parallel lines, are actually interrupted in their run, being composed of small parallelograms, sometimes of contrasted color, as is indicated in the lower right corner of the Figure. In the mitt silk, only the vermilion parallelograms are now active, the warps of those in another color having turned black. Each of the chevrons in two registers of the bonnet silk encloses an angular S-motive; the chevrons in the alternate registers, and that in the only register present in the silk at the finger end of the mitts, enclose a smaller chevron woven in outline in vermilion, the upper portion of the left arm of each of these enclosed chevrons being bent to run parallel with the right arm, and having a small lozenge applied to the outside angle of the bend. The chevron of the mitt silk has a further development of its bent arm, which is noticeably extended toward the straight arm.

To either side of the registers of chevrons on both silks is found a variety of geometric motives likewise repeating in the warp direction: zigzag lozenges, complete and open-ended; lightning zigzags, angular S-motives. These are all rendered in outline, mostly in vermilion but some in honey-colored warps; while still other motives are drawn in solid vermilion, such as the apex-to-apex triangles on the mitt, the grouped formations of tiny triangles (though in these, solid vermilion alternates with solid yellow), and the hooked Z-forms sometimes suggestive of written characters and even, on the mitt silk, showing a resemblance to conventionalized renderings of well-toothed dragon heads. Another minor difference to be observed between bonnet and mitt patterning lies in the formations of small triangles: on the former, their rows of 3, 3, 2, 1 compose incomplete triangles; and on the latter, rows of 1, 3, 3, 2, 1 are more suggestive of an irregular lozenge. In both silks, almost as if to remind us that these angular motives were woven from preference, appear gracefully-curved reverse *S*'s that prove the weavers' ability to render curvilinear forms when they were desired.[29]

The patterning of both of these silks is characterized by a delicacy of contrasting coloring that cannot be conveyed in a black-and-white reproduction.[30] The motives in solid vermilion provide strong, clear accents, supported by the diminishing intensity of figures that are only outlined in vermilion, and the still paler figures formed in honey-colored outlines, while the chevrons and certain of their flanking diagonals give a blurred, somewhat softer effect in which vermilion and honey-color interplay. Even the clustered formations of small triangles join in this play, offering diagonal rows of vermilion and of honey-colored triangles in alternation. In his counterpoint of color, no less than in the tension and poise of his design, the weaver here shows full mastery of the art, as of the techniques, of weaving.

In contrast to the patterns of the bonnet silk and the mitt silk encircling the fingers, in which geometric motives are composed in balanced asymmetrical arrangements, that of the other patterned mitt silk (Fig. 9) is a symmetrical composition throughout (somewhat obscured in the mitts themselves, to be sure, by the piecing already noted), in which groups of geometric motives are shown in symmetrically opposed formations contained within a lozenge framework. The basic structure of this design, which is woven in vermilion, honey-color, reddish-brown (Munsell 3YR 3.5/2.5) and darker brown (Munsell 5YR 2.5/3) warps, is a lozenge framework formed of stepped diagonal bands; the smaller lozenge-shaped interspaces formed by these stepped diagonals are bisected horizontally by slim shafts. Patterned triple bands (running in the warp direction), of grounds contrasting with the main ground,

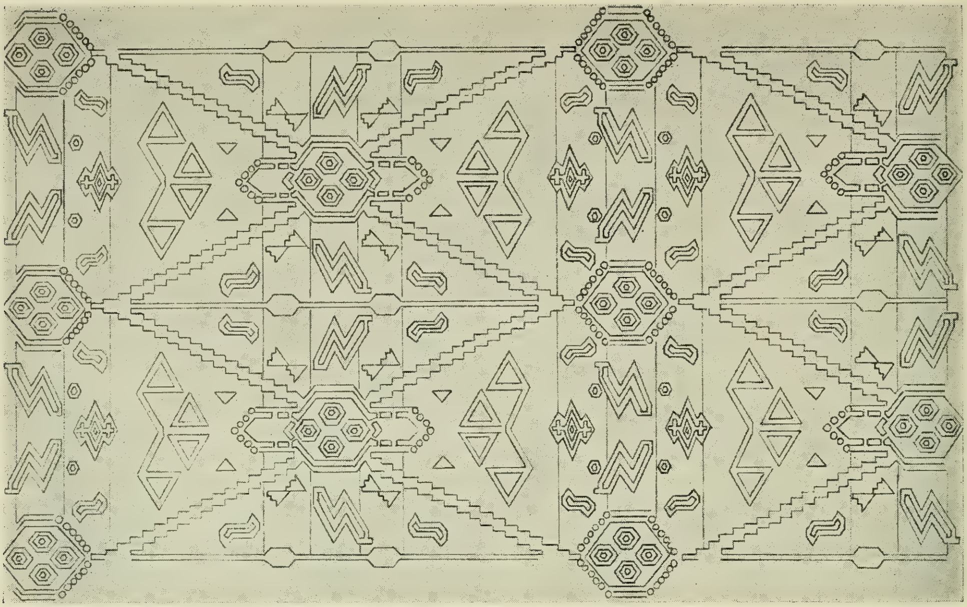


Figure 9. Design of warp-patterned silk with lozenge framework in the portion of the mitts about palm and back; the portion of the pattern here shown would be 13 cm. (5⅛ inches) long. The warp direction is vertical. — Drawn by Miss Alice S. Erskine and Mrs. Kathryn Dauber.

cut across this lozenge framework at the ends and centres of the lozenges; as the slender horizontal shafts cross the outer bands they broaden into small hexagonal bosses. The finely-stepped frames of the lozenges do not intersect but terminate in hexagonal bosses, each of which encloses four smaller hexagons. Although alike in their main features, these bosses differ in the way they are framed: the bosses at the narrow angles of the main lozenges have plain unadorned frames and tablets projecting horizontally at either side, to end at "pearled" points; those at the wide angles have "pearl" borders on two opposing pairs of sides, and bar borders on the remaining two sides (at right angles to the warp direction).

This intricate pattern seems to represent a scheme in which all of the design units are repeated both vertically and horizontally in symmetrically opposed formations, but it is actually a true design-turnover only in the warp direction (which, as we have noted, runs at right angles to the longitudinal axis of the large lozenges). The only features of the design which indicate that it is not a complete design-turnover in the weft direction (that is to say, in weaving terminology, a point repeat) are the lightning zigzags which appear in the centre registers of the triple bands. These motives, which would of necessity be on the axis of a design-turnover in the weft direction, are not symmetrical, and hence could not themselves be completed by this method.

The symmetrically opposed pattern units which were reproduced in weaving by some form of point repeat in the threading of the loom and a reversed order of shedding in the weaving, and which compose all the rest of the pattern, include pairs of triangles (two pairs of large ones, and one small pair) in the end fields of the main lozenges, one pair of the larger triangles being joined by a shallow V-shaped stem that is actually a continuation of the side walls of the triangles; zigzag lozenges in the outer registers of the triple crossbands and, above and below these lozenges, small hexagons with open centres, and paired parallel lines terminating at one end with an upward, at the other end with a downward, point. Further pattern motives symmetrically opposed are the paired parallel lines with angular terminals exactly like the ones noted above, but larger. Nearby, in the adjacent outer band of the triple banding, are paired small triangles apex-to-apex.

Before examining these stylistic elements more closely, it may be well to give some attention here to the method by which the patterning of the silks was achieved. The term "warp-patterned" is used in the present article to indicate a warp-surfaced weave with tabby binding, in which patterning is developed in the warp, and an alternate weft extends each warp float on either side of each main weft.[31] All of the figured silks in the bonnet and mitts were woven in this technique, as were most of the polychrome figured silks found at Han sites. No universally satisfactory designation[32] has as yet been devised for this weave which, because it was first noted in Han finds, is still often referred to by some scholars and textile specialists as the "Han weave," or the *"armure Han."* We now realize that it was developed at a much earlier date; and some of the silks in the Shōsō-in treasury at Nara witness to its continued existence long afterward in the T'ang period (618-906 A.D.). Its smooth, finely ribbed face (the ribbing is much more noticeable in those pieces with more widely-spaced wefts, such as the Noin-ula silk with cocks in the Philadelphia Museum of Art and in the Hermitage Museum in Leningrad) is formed by closely set columns of warp-floats, each column containing a warp of each color in the fabric — in the bonnet silk, for example, vermilion, honey-color, and brown. The wefts are all the same shade of dark brown. The warp-float of the desired color is brought to the face of its column over three wefts and under one weft; the other two colors or warps in the same column are tied, in similar floats over three wefts on the reverse of the fabric, by the weft which is centered under each warp-

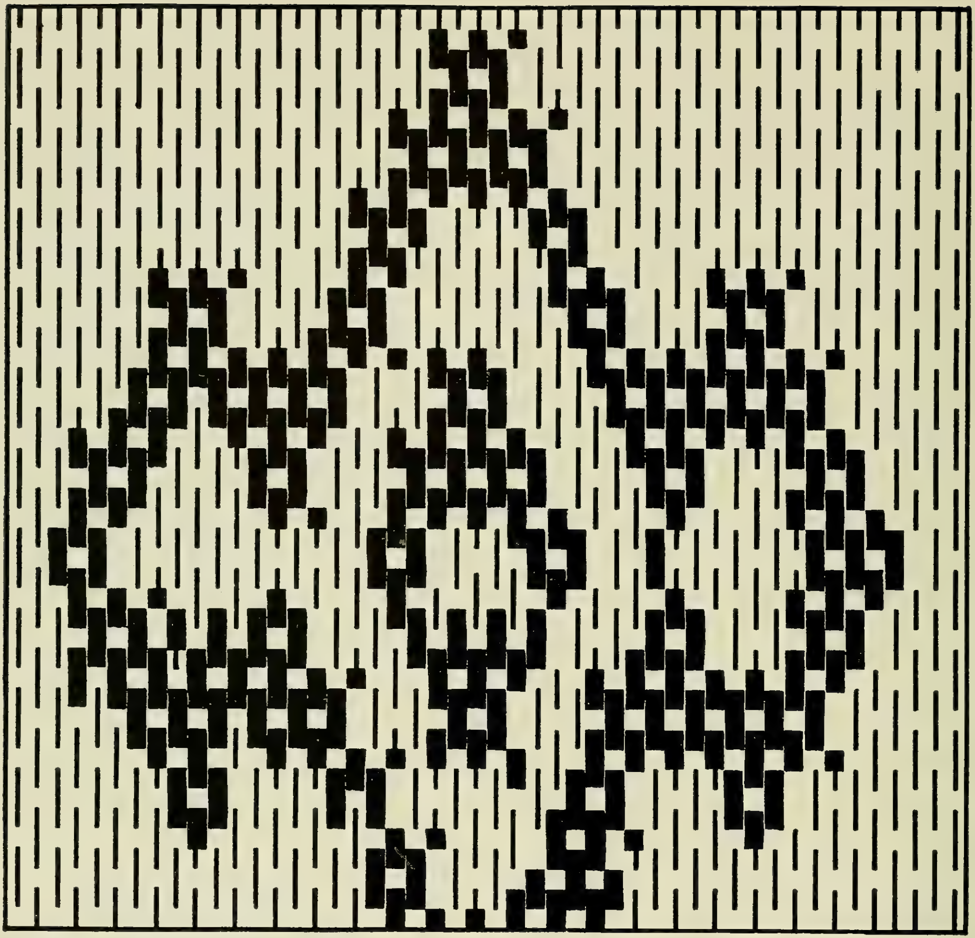


Figure 10. Diagram on squared paper of a weft treatment observed, apparently for the first time, in the warp-patterned palm silk of the Cooper Union Museum mitts. In this detail of one of the zigzag lozenges set at the edge of the triple banding, the black strokes indicate warp floats, those wider being in the patterning color, those narrower being in the color of the ground; each blank square indicates the crossing of a weft over a warp column. The conspicuous vertical rows of three blank squares indicate the crossing of three wefts in succession over a single pair of warps, and illustrate the deliberate raising of alternate "inner" wefts at given intervals so as to accent one edge, always on the same side, of pattern motives. This intentional variation in the basic structure is a refinement of technique, used with great artfulness in the palm silk, that has not been reported in previous studies of the more numerous warp-patterned silk fabrics of the subsequent Han period. — Drawn by Mrs. Kathryn Dauber.

float on the pattern face. The same weft appears in the same binding position on alternate warp-columns. Alternate wefts do not, with exceptions to be noted below, appear on either surface, but they support the long warp floats on both surfaces and make it possible to change a warp from one surface to the other when a color-change is required by the pattern. The resulting double-faced fabric with a tabby binding is truly reversible, in both structure and pattern, only when there are two colors in the fabric thus woven, and therefore only two warps (one of each color) in each warp-column. When three colors are used, the warp-floats on the reverse are always composed of the two warp colors in each column not in use on the face of the fabric, while the warp-floats on the face are each made up of one warp (though instances of the pairing of warp-floats on the face do occur, as will later be noted).

In the silks in the Cooper Union Museum bonnet and mitts, this characteristic weave-structure is employed with the utmost freedom and skill to form small, intricate and varied patterns. When required by the outlines of certain motives, a warp-float, in passing from the face to the reverse of the fabric, may be shortened from three to two wefts, while the warp-float of contrasting color rising to the face will also cross two wefts (the one that its predecessor crossed and the next one) before falling into the regular order of over three under one. (These echelonned two-float warps have happily provided the means of establishing, through microscopic examination of the silk at the finger end of the mitts, the patterning otherwise lost to view through blackening of the warps of one of the colors used in the silk.) Besides the echelonning of two-float warps along the lines of color change, one sees frequent instances of the paired floats of warps of two different colors — a procedure so often found as to suggest that it was a deliberate means of color-shading. In contrast to such artful variations are occasional shedding errors revealed in random horizontal rows of warp-floats over five, or even seven or eleven, wefts.

In the mitt silk with lozenge framework a similar weave construction is developed in terms of warp bands, each of two colors. The bands bearing large hexagonal bosses are patterned in vermilion warps with a ground of honey-color warps; the flanking bands are patterned in honey-color warps against a ground of reddish-brown warps that must have changed from a different original color. The broader areas between the triple bands are patterned in honey-color warps against a ground of darker brown warps.[33]

In the weft treatment of the Cooper Union silks are seen a skill and freedom similar to those of the warp-handling. The alternate wefts, whose function is to maintain the warp-float surface and to permit flexibility in passing a warp from one surface to another, and which as a rule do not appear on either surface of the fabric, are at times purposely raised to the face in pairs, in these silks, apparently as another means of effecting a change of color by suppressing a warp-float of one color before the succeeding warp-float of a different color can be brought to the face in that column. To some extent in the bonnet silk and the silk about the mitt finger ends, but most noticeably in the mitt silk with lozenge framework, alternate wefts are thus deliberately raised along one side, and always the same side, of patterning motives, as though for the purpose of emphasizing, by change of texture, the edge of the motives.

This ingenious procedure, which seems to have been noticed in no other published Chinese warp-patterned silks, is shown in Fig. 10, a diagram of the patterning warps forming a detail of the triple lozenge in alternating pairs of outer bands in the triple bandings of the palm silk. The diagram shows a portion of the larger, central lozenge, with its lozenge-shaped "eye"; the left inner edge of the lozenge, the left inner edge of the "eye," and the right outer edge of the eye, are all marked by the raising of the alternate wefts along with the main wefts (in the places shown on the diagram by vertically continuous blank spaces three squares in height). As the diagram clearly shows, this use of the alternate wefts could only have been deliberate. Were such use required by the nature of the weaving procedure, it would of necessity appear along both edges of the "eye," for this is in the main symmetrically patterned and is composed of an odd number of warps; and as it has been possible for the weaver to avoid the use of these secondary wefts for binding along the left outer edge of the "eye," it would have been equally possible — as far as weaving requirements are concerned — to avoid the similar use of these wefts along the right edge.

Elaborately patterned silks like these make inevitable the conclusion that the drawloom principle used centuries later in other types of weaves in the Near East and Europe was used far earlier in China. Looms for patterned fabrics of this weave in this period may well have been constructed with four harnesses for the ground shedding and a separate series of controls for the warps brought to the surface of the fabric to form the pattern; or, as for practical reasons seems more unlikely, the looms may have operated with individual controls for each warp in both ground and pattern. As in the drawlooms known from later times, these controls may have consisted of a series of threads, each looped to a warp to be raised for patterning, the threads for a given shed being tied together at their opposite ends by a cord; each of these cords when pulled or drawn would thus raise the pattern warps for one shed, and the cords would be pulled in accordance with the shedding sequence required by the pattern. In the wide and complicated pattern units that presumably repeat only vertically in our silks and in many of the most beautiful of the Han cloud-band-and-animal silks, the demanding process of threading and tying up the fine and numerous silk warps (which in the average known widths of 50 cm. would, in our bonnet silk, run to 7,500 warps) may well have been the reason for the shortness of the same repeats vertically (in the bonnet silk, for example, 2.4 cm., the repeat being composed of only 104 wefts); a short repeat would require a smaller number of these elaborately prepared sheds than would a long repeat. Certain other characteristics of drawloom threading and tying up are seen in the Cooper Union silks. A consistent error in the same motive from repeat to repeat reflects an error in the original mounting of the loom; while wide warp skips and small inconsistent deviations in the same motive in different repeats may well be the result of imperfect or incomplete shedding, which may occasionally occur with the numerous, closely threaded warps required by these patterned silks. In one repeat of the bonnet silk, a sequence of four sheds has been repeated, apparently through momentary forgetfulness on the part of the weaver or his helper.

These conjectural looms have never been found and do not seem to be pictured in any of the Late Eastern Chou or Han paintings or reliefs.[34] The reliefs do show a two-treadle (and thus a two-harness) loom which could only be for tabby, and may well have been used in the homes to weave household linens, blankets, and so forth.[35] The patterned silks were perhaps a workshop product whose tools are yet to be discovered. These tools must surely have included some form of drawloom and some version of the *mise-en-carte* or weaver's diagram.

We come now to a consideration of the stylistic features of these silk patterns as they relate to the problem of dating. Here, as we shall see, we are concerned not only with individual motives but, to an even greater degree, with the kind of arrangements in which they appear.

Many of the individual motives that ornament all three of our patterned silks — triangles, zigzag and open-end lozenges, angular *S* and *Z* forms, curvilinear reversed *S*'s — belong equally to the design vocabularies of both Late Eastern Chou and Han objects; they are found endlessly in the decoration of bronzes, painted pottery and lacquers, as well as in many of the Han textile designs. The kind of trifid ornamentation seen at the lateral points of the zigzag lozenges in the bonnet silk, to mention one element of more limited time-range, does not appear in any of the bronze, pottery or lacquer patterns, but it does occur in some of the gauzes of the Han period found at Noin-ula.[36] The formations of small triangles, while likewise limited, as far as we now know, to textile patterning,[37] are found over a longer time span. Their earliest known occurrence is in the pattern of a small pre-Han fragment found at Pazyrik;[38] and similar groups of triangles ornament some of the

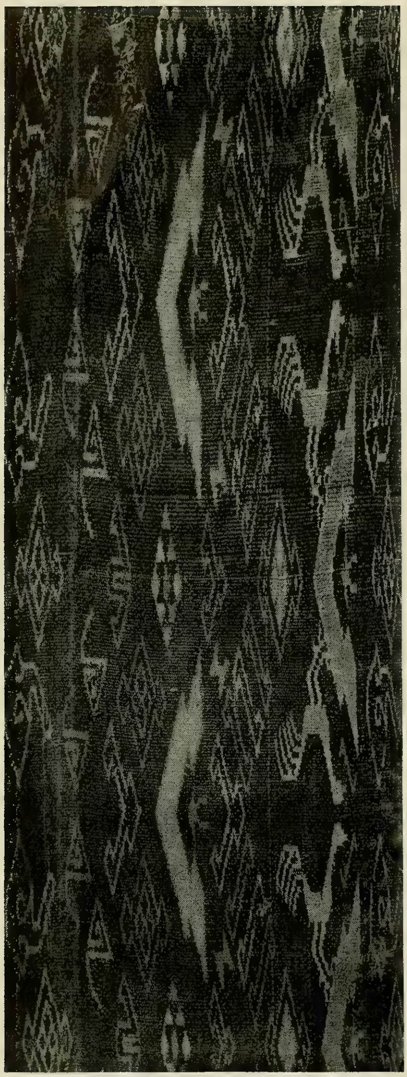


Figure 11. Warp-patterned silk with cocks and zigzag-lozenge fragments; from graves of horse-riding nomads of the Han period, Noin-ula Mountains, Mongolia. Faint brick-red and light yellow-brown on blackish-brown ground. Warp repeat about 15.2 cm. (6 inches); about 114 warps, 26 wefts, per cm., untwisted. The Hermitage Museum, Leningrad; the Philadelphia Museum of Art.

textile fragments, also believed to be pre-Han in date, that have recently been recovered from Ch'u Kingdom sites in and near Ch'ang-sha.[39] Their continued use into the Han period is attested by one of the Noin-ula silks (Fig. 11), of the beginning of the first century B. C.

The most striking motives in the two asymmetrical silks — in the bonnet, that is to say, and the band at the finger end of the mitts — are the chevrons and their flanking diagonals. These contitute the basic structural elements of a design unlike any known Han textile pattern, and suggest the angled parallel-line backgrounds and fillings in Late Eastern Chou mirrors and bronzes[40] far more clearly than they do any known Han motives.

While the time-range of the individual motives in our three patterned silks in the Cooper Union Museum is too great to permit the close delimitation of the dates of production of the silks, the manner of their arranging may be profitably examined for more specific clues. The patterns of the bonnet silk, and of the mitt silk that encircles the fingers, are distinguished by the skill with which they are composed asymmetrically through the balancing of individual motives that vary considerably in size as well as shape. It is a remarkable fact that even in the bonnet silk, where we possess two-thirds of the presumed original width, none of the horizontal sequences of the motives is repeated, and thus it is reasonable to suppose that there was no repeat in the remaining portion, less than half a width, that was not made up into the bonnet. This balancing of elements in an asymmetrical arrangement, organized as it is by the forceful thrusts of chevrons and their flanking diagonal bands, presents an inescapable comparison with the balanced asymmetry of the Late Eastern Chou design, as characteristically embodied in the style of the Huai River style bronzes.

It is quite true that the use of geometric forms for patterning carried over into Han times, but an examination of a few representative examples reveals significant differences from the two Cooper Union silks under consideration. The Noin-ula silk[41] to which reference has already been made (Fig. 11) is a typical demonstration of the manner in which many of the geometric textile patterns were organized in the Han period. Here we find the design turnover,[42] which is perfectly logical for completely symmetrical patterns, and which was probably used in China for this purpose long before Han times, but which could be employed with only limited success for producing asymmetrical repeat patterns. Although the Han geometric textiles managed to approximate the effect of balanced asymmetry in certain arrangements by a judicious selection of symmetrical motives that could be plausibly rendered in reverse or completed by a turnover, the total effect of the pattern was inevitably crowded and distorted. The confusion was compounded when non-symmetrical motives, such as the cocks we see here, were included, for these had to be rendered in their entirety before the turnover, after which they were repeated in reverse, that is, upside-down. Although it is true that many of the individual elements in the patterns of these Han geometric silks are strongly asserted, we find virtually no trace of the felicitous balanced asymmetry of all-over aspect that is so marked a characteristic of the Cooper Union bonnet-silk and finger-end patterns. One forms the impression that this turnover version of asymmetrical geometrical patterning in Han textiles is a reworking of an older idiom in more economical, and less successful, terms. In their geometrical silks, at least, the Han weavers seem to have preferred and understood compact, controlled treatments, as in the small lozenge-repeat patterns seen in so many Han silks and gauzes.

Another example of geometric patterning noted among Han textiles which seems to bear out this theory is supplied by a second silk from Noin-ula. The pattern of this textile, in the Hermitage Museum in Leningrad,[43] is composed of several forms of zigzag lozenges, *Z*'s, *S*'s, triangles and other motives, not readily identifiable, which are grouped in lozenge-shaped formations. These groups, which are approximately but not truly symmetrical, are in turn arranged in diagonals, to give the effect of a symmetrical all-over lozenge framework; but because the groupings are not truly symmetrical, this pattern, like that of Cooper Union bonnet silk, could not have been completed in weaving by a reversal in the shedding order. It is interesting to note, however, that despite the fact that many of the motives in this Noin-ula silk are the same as those in the Cooper Union silks, and that in

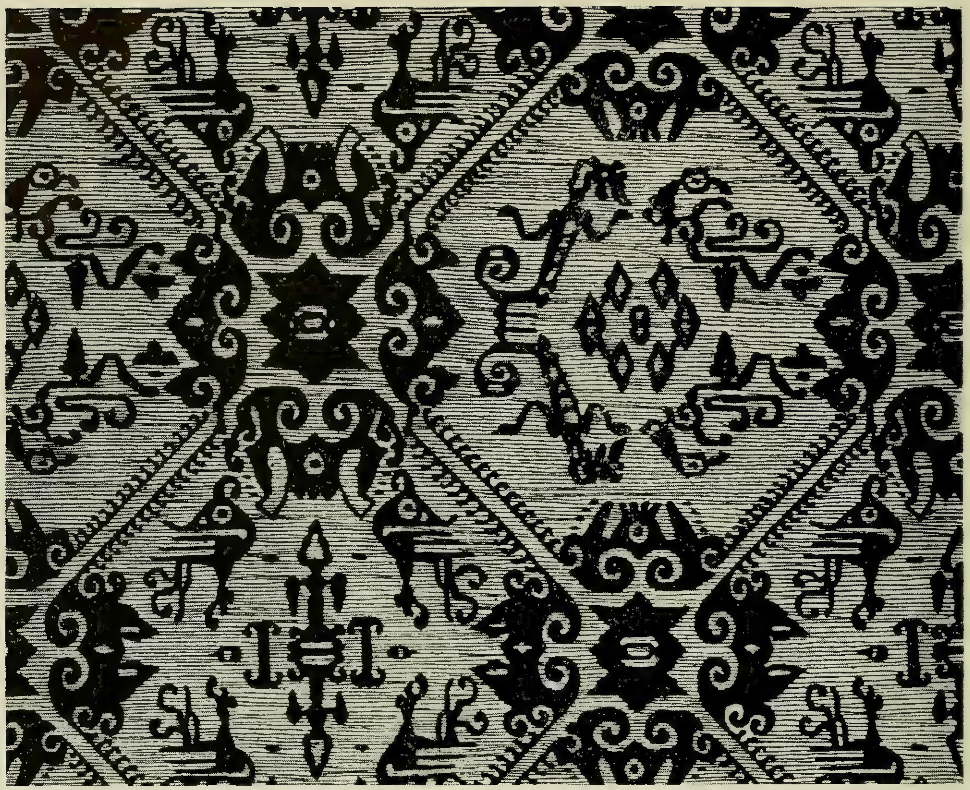


Figure 12. Warp-patterned silk with birds and dragons in lozenge framework; found with material of the Han period at the north-western Chinese Limes, near Tun-Huang, eastern Turkestan. Indigo on greenish-gold ground. Dimensions of each lozenge, about 3¼ inches square; about 130 warps, 65 wefts per cm. (330 warps, 165 wefts, per inch). British Museum, London. — After drawing by Fred H. Andrews in: Stein, *Serindia,* Vol. IV, Pl. CXVIII.

all three silks these motives are arranged in unsymmetrical groupings in a short repeat which do not complete themselves by reversal on a horizontal axis, there is actually very little basis for comparison between the two. In the Cooper Union bonnet silk pattern, and in that of the finger end of the mitts, we have a composition in which the powerful thrust of the chevron-arms and diagonals and the subtle spacing of all of the motives clearly indicate a desire to emphasize the dynamic principle of balanced asymmetry, whereas in the Noin-ula silk, every effort seems to have been made to pull the pattern units together into a semblance of a completely symmetrical arrangement.

In stressing the awkward handling of asymmetrical arrangements of geometric motives in Han textile patterns, we do not mean to imply that the principle of balanced asymmetry was never observed by Han weavers. It was, in fact, beautifully applied in the famous polychrome animal and cloud-scroll silks,[44] the designs of which, though completely unrelated in subject-matter to the Cooper Union bonnet silk, quite obviously exemplify the same accomplished use of balanced asymmetry. The direct stylistic relationship between these animal-and-cloud-scroll silks and the animal-and-arabesque patterns that had previously received their most spirited and appealing development in Late Eastern Chou bronzes, of the Huai River valley, and lacquers, has already been observed; despite their realistic representation of figures and animals in a manner that clearly indicates a Han date, their basic style is anterior to Han times, and is one that must have originated with Late Eastern Chou artists. The patterns of the two Cooper Union silks that we have been discussing, however, are not only successful examples of the asymmetry of Late Eastern Chou design, but they are composed of motives that can all be accounted for in the repertory of this period, and possess none of those naturalistic elements of textile patterning that apparently came into use first in Han silks.

In sum, the bonnet silk and the silk at the finger end of the mitts are sufficiently distinguished from Han silks by arrangement of patterning and by range of pattern motives, and are sufficiently related to the ornament and composition of Late Eastern Chou material, to justify their assignment to a pre-Han, Late Eastern Chou, date, presumably in the third century B.C.

The other patterned silk in the mitts (Fig. 9) is quite as difficult to account for as a product of the Han period. Although most of the motives in this pattern are familiar elements in the Han vocabulary as well as in that of Late Eastern Chou, the way in which the motives are treated in this silk about the palm and the back of the mitts is quite unlike any of the Han arrangements seen in the textiles of that period. The symmetrical all-over geometrical patterns that have been noted among Han textile finds are repeats of squares, rectangles, hexagons, octagons, lozenges, and angular undulating lines (carried horizontally across the fabric in parallel formations), which were used singly or in uncomplicated combinations.[45] In contrast to such simple treatments of simple forms, which appear to have no profound symbolic significance, we have in this silk a complex of esoteric motives arranged in groupings which seem to emphasize their symbolic import. A few textiles of established Han date have lozenge framework patterns comparable to that of the mitt silk,[46] but these enclose animal forms of one kind or another: some, fantastic and distorted, as for example, in the silk from the Limes at Tun-huang illustrated in Fig. 12; some, semi-conventionalized realistic forms;[47] and some, debased rendering of realistic animals.[48] A pre-Han date for the Cooper Union Museum lozenge silk cannot, obviously, be established on negative evidence of this sort; nor can we assume that the pointed tablet motives and slender horizontal shafts provide any positive evidence of a pre-Han date, because these motives have not been noted in either the Late Eastern Chou or Han design vocabulary. It is difficult not to believe, however, that the architectonic arrangement of delicate and varied geometric forms which appear here was directly inspired by what Laufer[49] has described as the "geometric culture of the Chou period established on the interrelations of celestial and terrestrial phenomena, formulated by numerical categories and holding sway over the entire life and thought of the nation in all matters pertaining to government, administration, religion, and art."[50]

Here, for the time being, must rest the presentation of elements on which may stand a pre-Han dating of these silks. Of the actual significance of the enigmatic and elusive motives composing their patterns, and the concepts governing their use in these unexplained conjunctions, endless speculation might be possible, limited only by the imagination of the viewer. At a later date, aided perhaps by the recovery of a still larger body of material from the vanished cultures of China, present-day conjecture may be replaced by more clearly-comprehended fact. In terms of their symbolic import, there can be no doubt that the patterns of these silks are charged with connotations that relate to the cosmological and ancestral cults of ancient China, whose all-permeating importance is reflected in a rhetorical question from the memoirs[51] of the famous historian and astrologer of the early Han period, Ssŭ-ma Ch'ien:

> *"Since the race first existed was there ever a moment when, from generation to generation, the sovereigns did not observe the sun and the moon, the planets and the stars?"*

In the meantime, pending the resolution of the questions that we have here discussed, the silks may be relied upon to arouse admiration for their beauty and subtlety, at once so complicated and so simple. Delicate in their balance of design and their play of color, they are almost miraculous examples of the art of silk weaving in one of its earliest surviving manifestations. The Cooper Union Museum is justly proud to be among the seven or eight museums in the world where such treasures as these silks may be seen, studied and enjoyed, beautiful in themselves and landmarks in the long, continuous story of the creative spirit of mankind.

JEAN E. MAILEY

CALVIN S. HATHAWAY

NOTES

[1] In the course of preparation of this article we have consulted many specialists in the various fields of art history and techniques that concern the silks, and have met with enthusiastic and generous help. We should like to acknowledge most gratefully the information and judgment on various aspects of the study that have been shared with us by the following: Miss Louisa Bellinger, Mr. and Mrs. Gerard Brett, Mr. and Mrs. Harold B. Burnham, Mr. Frank Caro, Miss Irene Emery, Miss Claire Freeman, Monsieur Félix Guicherd, Mr. John F. Haskins, Miss Jean Gordon Lee, Mr. Sherman E. Lee, Mr. Fritz Low-Beer, Mr. John Lowry, Dr. E. Lubo-Lesnichenko, Dr. Yuri Miller, Miss Carol Racklin, the late Dr. Alfred Salmony, Mr. Laurence Sickman, Miss Pauline Simmons, Dr. Paul Singer, Miss Vivi Sylwan.

[2] 1951-45-1. Bonnet, 22 cm. x 14 cm.; ties, 24.2 cm. x 7.5 cm.
1951-45-4-5. Mitts, 21 cm. x 9 cm.
1951-45-3a to f. Six pieces of hemmed square, each approximately 11 cm. x 12 cm.

[3] Now in the collection of Dr. Paul Singer, Summit, New Jersey

[4] John Hadley Cox, *An Exhibition of Chinese Antiquities from Ch'ang-sha lent by John Hadley Cox, March 26 to May 7, 1939,* Gallery of Fine Arts, Yale University, New Haven, Connecticut, p. 4

[5] Vivi Sylwan, *Silk from the Yin Dynasty,* in the Bulletin of the Museum of Far Eastern Antiquities, No. 9, Stockholm, 1937, pp. 119-126

[6] C. W. Bishop, *The Chronology of Ancient China,* in the Journal of the American Oriental Society, Yale University Press, 1932, p. 232-247. There are two systems of dating early Chinese history: one, the so-called official dating system, based on the *Ch'ien han shu* (History of the Former Han Dynasty) by Pan Ku; the other, based on the *Chu shu chi men* (Annals of the Bamboo Books), an earlier record with more documentary and archaeological supporting evidence. Official dating for the Hsia Dynasty is 2205-1766 B.C.; dating by the Bamboo Annals is 1989-1558 B.C.

[7] Chang Ch'êng-tsu, *Ch'ang-sha ch'u-t'u Ch'u ch'i ch'i t'u-lu* (An Album of selected Designs of the Lacquer Wares excavated at Ch'ang-sha), Literary Digest Society, Peking, 1954
Chang Ch'êng-tsu, *Ch'ang-sha ch'u-t'u Ch'u ch'i ch'i t'u lu* (Illustrated Catalogue of Lacquer Wares of the Ch'u Period from Ch'ang-sha), Shanghai, 1955
Cheng Chen-To, *Building the New, Uncovering the Old,* in China Reconstructs, Nov.-Dec. 1954, p. 18-22
Chiang Hsüan-yi, *Ch'u min tsu chi ch'i i-shu* (The Ch'u people and their arts), in *Ch'ang-sha,* Vol. I, *ch'i ch'i* (Lacquer), Shanghai, 1949; Vol. II, *t'u t'eng i chi, chüan hua t'iao-k'o* (silk paintings, wooden figures, including human figures), Shanghai, 1950
Chinese Art Society of America, *Ch'ang-sha, The Art of the Peoples of Ch'u. 5th-3rd centuries B.C.* (A Loan Exhibition, New York, 1957)
John F. Haskins, *Recent Excavations in China,* in the Archives of the Chinese Art Society of America, X, 1956, p. 42-58
Hsia Nai, *Arts and Crafts of 2300 Years Ago,* in China Pictorial, Jan.-Feb., 1954, p. 31-35
Hsia Nai, *New Archaeological Discoveries,* in China Reconstructs, July-August, 1952, p. 13-18
Pei-ching li-shih po-wu-kuan (Academia Sinica) (ed.), *Ch'u wen-wu chan-lan t'u-lu* (Illustrations from the Exhibition of Cultural Objects from the Kingdom of Ch'u), Peking, People's Museum, 1954
People's Museum, Peking (ed.), *Ch'u wen-wu chou-lan T'u-lu Hsu* (A Pictorial Record of Historical Objects from Ch'u), Peking, Oct. 1954
Wang Yu-Chuan, *Relics of the State of Ch'u,* in China Pictorial, August 1953, p. 31-32
Yang Tsung-jung, *Chan-Kuo Hui-Hua Tzu-liao* (An Exhibition of Art from the Warring States), special reprint from *Wên-wu Ts'an Kao-tzu Liao* (Museum Bulletin), Peking, 1957

[8] Michael Sullivan, *Pictorial Art and the Attitude Toward Nature in Ancient China,* in The Art Bulletin, Vol. XXXVI, No. 1, March, 1954, p. 7-8

[9] John F. Haskins, *Recent Excavations in China,* in the Archives of the Chinese Art Society, X, 1956, Fig. 10 and p. 51

[10] James Legge, The Tribute of Yu, in *The Chinese Classics,* The Shoo King Part III, The Books of Hea, Book I (Hong-kong and London, 1865, 7 vols.), Vol. I, p. 99-119

[11] Se-ma Ts'ien, *Les Mémoires historiques de Se-ma Ts'ien,* traduits et annotés par Edouard Chavannes (Paris, Ernest Leroux, 1895-1905, 5 vols.), Vol. I, p. 312; Vol. III, p. 409, 503, 541, 559, 598

[12] James Legge, *op. cit.,* Vol. IV, The Shih Ching, p. 228-229

[13] For an excellent presentation of sericulture, degumming, dyeing and dyes, see: William Willetts, *Chinese Art,* Penguin Books, 1958, Vol. I, p. 207-212, 219-229, 241-242, 243

A scientific analysis of fibres and dyes in the silks recovered by the Russian expedition, under Colonel Petr Kuz'mich Kozlóv, at Noin-ula in 1924-25, is presented in: Artemii Alekseyevich Voskresensky and Nikolai Petrovich Tikhonov, eds., *Tekhnologicheskoe Izuchenie Materialov Kurgannikh progredenni Noin-ula* (Technical Study of Textiles from the Burial Mounds of Noin-ula), in Izvestiya, Rossiskoi Akademi Material'noi Kul'tury, Vol. XI, parts 7-9, 1932. A partial translation, by Eugenia Tolmachoff, of this study is available in the Bulletin of the Needle and Bobbin Club, Vol. 20, 1936, Nos. 1 & 2, p. 3-37.

[14] As observed above, Note 7

[15] Chiang Hsüan-yi, *The Ch'u people and their arts,* in *Ch'ang-sha,* Vol. II, 1950 (unpaged)
Chiang Hsüan-yi, *Ch'u min tsu chi ch'i i shu,* The Ch'u tribe and its art in *Ch'ang-sha,* Vol. I, Lacquer (Kunstarchäologie Society Publications, Series A, 1946; no pagination)

[16] This *lien* from Ch'ang-sha appears in many recent catalogues of Ch'u material, including *Ch'u wen-wu chou-lan T'u-lu Hsu* (A Pictorial Record of Historical Objects from Ch'u, Peking, October, 1954; catalogue of exhibition, June-November, 1953); and Chiang Hsüan-yi, *Ch'u min tsu chi ch'i i shu* (The Ch'u tribe and its art).

[17] Vivi Sylwan, *Investigation of Silk from Edsen-gol and Lop-nor,* Stockholm, 1949 (Reports from the scientific expedition to the northwestern provinces of China under the leadership of Dr. Sven Hedin, The Sino-Swedish expedition, Publication 32; VII, Archaeology, Pt. 6), p. 84 and fig. 49-a

[18] Many of the lacquered wood figures from Ch'ang-sha are found with their hands missing or are represented in poses with hands concealed.

[19] Miss Irene Emery of the Textile Museum, Washington, has suggested the term "double twining" for this technique. Mr. Harold Burnham of Jordan, Ontario, has suggested the term "twined plaiting." A late Eastern Chou mirror in the collections of the Royal Ontario Museum in Toronto has a piece preserved in its patina.

[20] Found in the toilet-box with the bonnet, mitts, and hemmed square, were three small flat combs with semi-circular tops, one bearing faint traces of lacquer; two rolls of black hair with a loosely plied cord of hair wound around each, lengthwise and crosswise. A small brush of some hard kinky fibre bound at the top by a hand-sewn casing of silk fabric of the characteristic warp-patterned silk, here of indistinguishable pattern; three narrow groups of long flat needles perhaps from some kind of pine-tree, delicately joined at the top by a knotted silk thread that passes transversely through the group three times and with traces of lacquer decoration — variously thought to be hair-ornaments or eyebrow brushes; and a long object — also a hair ornament, one may suspect — now disjoined into three parts: a bunch of woody fibres about 12 inches long with traces of silk textiles around the middle and one end, a small square plait of silk tabby strips, now dark brown (originally white?), and a little cage-like object of narrow rushes or reeds wound with a narrow silk tabby ribbon, complete the assortment. These also are now in the collection of Dr. Paul Singer.

[21] Three squares are still to be seen affixed to the inner face of the box-cover. Collection of Dr. Paul Singer

[22] A piece of the tabby lining of the bonnet with a plain selvage definitely indicating the warp direction has a count of 94 warps per cm. and 40 wefts, both untwisted. Thread count in the kerchief squares, as in the bonnet lining, varies considerably, and averages 68 warps, 52 wefts, per cm.

[23] Miss Sylwan has noted this practice in the garments found at Edsen-gol and Lop-nor, in *Investigation of Silk from Edsen-gol and Lop-nor,* Stockholm, 1949, p. 80, etc.

[24] Outstanding examples of these are in the William Rockhill Nelson Gallery, Kansas City, Missouri; in the possession of Mr. Fritz Low-Beer of Rome and New York; and in the Seattle Art Museum.

[25] Bernhard Karlgren, *Huai and Han,* in the Bulletin of the Museum of Far Eastern Antiquities, Stockholm, No. 13, 1941, p. 1-125

[26] Fritz Low-Beer, in *Two Lacquered Boxes from Ch'ang-sha*, in Artibus Asiae, Vol. X/4, 1947, p. 302-311, and Vol. XI/4, 1948, p. 266-273, has traced the relationship between lacquer designs and Karlgren's mirror chronology.

[27] Some of the Ch'ang-sha lacquers have patterns in which the animal forms, though still dynamically rendered, are more or less submerged in drier, more consciously decorative detail. These may, as Mr. Low-Beer pointed out, represent a later carry-over of the Late Eastern Chou Ch'u style into Han times. Naturalistic representation occurs in both periods (see the exquisite pheasants on the Seattle lacquer box dated in the 5th century B.C.), but this too is a little more heavy-handed and literal by Han times.

[28] The repeat probably fills one breadth of the original fabric, as do the repeats in certain Lou-lan silks in the same weave. See Stein, *Innermost Asia,* Vol. III, pl. XXXIV (L.C. 07, a), pl. XXXV (L.C. vii. 02), with respective breadths of 45.7 cm. and 48.3 cm.

[29] In the course of studying the silks, the writers have found it necessary to prepare diagrams on squared paper of most of the motives of the patterned silks in the bonnet and mitts. The diagrams are on file at the Cooper Union Museum.

[30] The visual effect of these silks is more fully enjoyed now than was possible when they entered the collections of the Cooper Union Museum. Thanks to the generous collaboration of the Boston Museum of Fine Arts, which offered to clean the pieces, to the recommendations of its research laboratory directed by Mr. William J. Young, and to the skilled work of Mrs. Jean Lopardo, at that time Assistant Curator of Textiles, the rich glow of colors in the silks is now well seen.

Mrs. Lopardo has written an account of the method used for the safe cleaning of the silks in their exceedingly tender and brittle condition; it will appear in the *Bulletin de Liaison* of the Centre International d'Etude des Textiles Anciens, in the forthcoming no. 9 (Jan. 1959).

Mr. Young has examined minute portions of the silks, and has most obligingly reported on his findings:

BONNET SILK. Cultivated silk (long straight filaments with circular dimension) with average diameter of 13 microns, not completely degummed. Upon extraction, the brown dye of the ground appeared yellow, perhaps as result of preliminary dyeing with safflower very common in China; the silk dyed only with this may have been used for the pale brown patterning; the brown ground may be formed of silk thus dyed which then received a second dye-bath to darken it. The mordant was iron. Dye-curve not identifiable. The vermilion is powdered cinnabar used with a binder of some sort, but no mordant.

BONNET LINING. Cultivated silk with average diameter of 14.5 microns, not completely degummed. On extraction, dye appeared yellow, but dye curve not identifiable.

BONNET-TIES. Cultivated silk with average diameter of 11.5 microns, not completely degummed. Iron and aluminum present, probably mordants, but dye-curve not identifiable.

MITT THUMBS. Cultivated silk of average diameter of 16.5 microns. Silk well degummed. Dye curve not identifiable.

SILK AROUND PALM AND BACK OF MITT. Cultivated silk. Vermilion (not tested by Mr. Young) is probably powdered cinnabar used with binder of some sort but no mordant. Dye of other warps not identifiable.

MITT WRISTBAND. Cultivated silk of average diameter of 16.5 microns, well degummed.

KERCHIEF. Cultivated silk of average diameter of 10 microns, well degummed. Dye-curve not identifiable.

Dye-curves for all of these are on file at the Boston Museum of Fine Arts for future comparison with identifiable dye-curves.

[31] Vivi Sylwan, in Investigation of Silk from Edsen-gol and Lop-nor, gives (p. 112-114) an excellent diagram and description of this weave-structure, and (p. 103-106) of the early Chinese weave with warp floats on a tabby ground first seen in the Chinese silks found at Palmyra and Lou-lan, though the names she has chosen to give these two warp-patterned weaves are confusing, as pointed out by Dorothy G. Shepherd in her review of the book in Ars Orientalis, Vol. II, 1957, p. 610-611.

In this same review, Miss Shepherd gives her analysis of the warp-patterned double-faced weave seen in the Lou-lan and Noin-ula patterned silks, as produced by a single set of warps used in various color series and a single set of wefts. Miss Shepherd states her belief that this is a primitive technique known in primitive and folk textiles (*e.g.,* in Pre-Columbian Peru) and carried to a high degree of perfection and fineness by the Chinese silk weavers.

It is true that Peruvian textiles show infinite variety in warp treatment, and among the earliest now known, from 2,000 to 1,500 B.C., are cotton tabbies with designs or stripes of warp-float structure on a tabby ground similar to that of the Chinese silks found at Palmyra and Lou-lan. Later Peruvian textiles from about 800 to 1,500 A.D., in both wool and cotton, show stripes and sometimes all-over patterns executed in the double-faced warp-patterned weave of the early

Chinese silks. But as to the sequence of development in Peru, in spite of the temptation to consider the warp-float-patterned tabby a forerunner, we must await the study of more of the early material. Certainly, we can say that the Chinese usage of both these weaves in silk shows much more refinement and consistency in that each weave is used alone to create complete, finely-grained fabrics with exquisitely arranged and developed designs, sometimes of very small scale and great variety as in the Cooper Union silks. The Peruvians, on the other hand, working in coarser wool or cotton, often combined these two warp treatments with many other weaves in a single fabric, with emphasis on color, texture, and bold design.

William Willetts, in *Chinese Art,* Penguin Books, 1958, Vol. I, p. 250-253, also gives a clear technical discussion of this weave, with diagrams, summarizing and evaluating the opinions of other writers on the subject (Pfister, Reath and Sachs, and Sylwan) and supporting Miss Sylwan's belief that this more highly evolved weave of the polychrome silks developed from the weave with a regular tabby-tied warp-float decoration on one surface of a tabby ground as seen in the Chinese silks found at Palmyra and Lou-lan. Thus he dismisses the theory of Miss Reath and Mrs. Sachs that the alternate "inner" wefts characterizing the polychrome warp-surfaced structure were deliberately introduced to lengthen the warp-floats and strengthen the fabric generally, since according to his view, these wefts are survivors of the tabby ground.

It might be possible, in any case, to consider the weave with warp floats on tabby ground as a simplified approximation, through the use of only two ground harnesses and a series of pattern controls, of the effect of warp patterning accomplished rather more elaborately by the weavers of the polychrome warp-patterned silks. The seeming survival of tabby technique in the warp-patterned silks, as seen in the studied use of secondary wefts to bind warps in our silks along the edges of pattern motives, seems to lend strength to the theory of Miss Sylwan and Mr. Willetts, although neither appears to know of this artful device.

For further technical discussions of the warp-patterned weave of the Cooper Union silks, see:

J. F. Flanagan, review of Pfister's *Textiles de Palmyre* in the Burlington Magazine, August, 1935, p. 92-93.

Lila M. O'Neale and Dorothy F. Durrell, *An Analysis of the Central Asian Silks Excavated by Sir Aurel Stein,* in the Southwestern Journal of Anthropology, Vol. I, 1945, p. 410-414 and Pl. 5.

R. Pfister, in *Textiles de Palmyre,* Paris, Editions d'Art et d'Histoire, 1934, p. 39-60.

R. Pfister, *Textiles de Palmyre III,* Paris, Editions d'Art et d'Histoire, 1940, p. 41-42, 54-62.

R. Pfister, *Les Premières Soies Sassanides,* in, Musée Guimet: *Etudes d'Orientalisme publiées à la mémoire de Raymonde Linossier,* Paris, 1932, p. 466-468. This contains diagrams showing what Pfister understood as two variants of this weave — one based on Andrews's diagram of the surface of the Lou-lan polychrome silks, "l'armure Andrews"; one showing the structure of the warp-patterned weaves found at Noin-ula, "l'armure Kozlov." As noted in O'Neale and Durrell, the arrangement of threads shown in Andrews's diagram would not function as a woven fabric. The Lou-lan and Limes patterned silks, however, are probably all of the same weave structure as those from Noin-ula; further technical examinations of Sir Aurel Stein's finds are now in progress at the Victoria and Albert Museum and should ultimately yield even fuller information about the weaves of these fabrics than that available in Stein's numerous publications.

C. Rodon y Font, "Le métier Chinois," in *L'Historique du Métier pour la Fabrication des Étoffes Façonnées,* traduit de l'Espagnol par Adolphe Hullebroeck, Paris and Liège, 1934, Librairie Polytechnique Ch. Beranger, p. 14-18.

Eleanor B. Sachs (from notes compiled by Nancy Andrews Reath), *Notes on the Weaves of a group of Silk Fabrics from the Burial Mounds of Noin-ula now in the Pennsylvania Museum of Art, Philadelphia,* in The Bulletin of the Needle and Bobbin Club, Vol. 20, 1936, Nos. 1 and 2, p. 74-78.

[32] Some writers, such as Miss Sylwan, describe the weaves as a rep, but we are unwilling to use the term because of the confusion that it creates in the current effort, among members of the Centre International d'Etude des Textiles Anciens, to develop an agreed international vocabulary of textile fabrics woven before the development of the power loom. In French terminology, *reps* is a weave characterized by longitudinal ribs formed by weft floats that cover, on the face of the fabric, a tabby crossing visible only on the reverse; it may be constructed with a one- or a two-warp system. In English, "rep" refers to woven fabrics with a corded surface, but the ribbing may be either horizontal or longitudinal and may be formed by either wefts or warps, in a tabby crossing. Were all these Chinese fabrics woven with warps of only two colors, as is the silk about the palm and back of our mitt, they would fall easily into the category of reversible tabby; but the introduction of a third warp color, while affecting very slightly the actual

weaving process, produces a non-reversible fabric.

[33] It is interesting to observe, in this connection, that the silk in one of the mitt lozenge bands betrays an error in threading the loom; the vermilion warps were here set over by some twenty warps, so that they formed the pattern of a portion of the pointed tablet, rather than the mid-portion of the large hexagonal boss. This lateral displacement of the bands of warp coloring continues to the edge of the strip used in piecing the mitt.

[34] See Willetts, *op. cit.,* I, p. 229-241, for more complete discussion of Chinese looms and weaving.

[35] Such reliefs are illustrated by Edouard Chavannes, *Mission Archéologique dans la Chine Septentrionale* (Paris, Ernest Leroux), 1909, Planches; Pl. XXX: Chambrette de Hiao T‘ang Chan; Pl. XLIV: Wou Leang Ts‘eiu.

[36] R. Pfister, *Textiles de Palmyre,* Paris, 1934, Fig. 14, p. 49. Otto Kümmel (ed.), *Chinesische Kunst; 200 Hauptwerke der Ausstellung der Gesellschaft für Ostasiatische Kunst in der Preussischen Akademie der Künste,* Berlin, 1930, Cassirer, Pl. XLVII. The illustration of one of these gauzes in the latter shows the foliation as far more angular than it appears in Pfister's sketch of the same gauze, or than it actually is in the Cooper Union silks.

[37] We are referring here to groups of triangles. The ancient apex-to-apex triangle motive is seen in Late Eastern Chou pottery decoration, in both painted and cut-out treatment, and we have noted it in a crossing band in one Lou-lan figured silk (see Stein, *Innermost Asia,* Vol. III, Pl. XXXV, L.C. 03.) of Han date.

[38] S. I. Rudenko, *Kul'tura Naseleniya Gornogo Altaya V Skifskoe Vremya* (*The Culture of the Populations of the Altai Mountains in the Scythian Period*), Leningrad, 1953, Pl. LXXVI, 1. A manuscript translation of part of the text by Gerard Brett of Toronto furnishes the information that this is a green and brown weft twill with 24 warps and 18 wefts per cm. Rudenko dates this entire find to about the fifth century, B.C., as does John F. Haskins, in *Pazyrik, the Valley of the Frozen Tombs,* in the Bulletin of the Needle and Bobbin Club, Vol. 40, Nos. 1 & 2, 1956, p. 3-47. Walter Endrei, *Observations sur le problème des fragments de tissus de Pazyryk,* in the *Bulletin de Liaison du Centre International d'Etude des Textiles Anciens,* No. 7, January, 1958, p. 36-43, agrees with Russian archeologists who question Rudenko's dating and suggests a third-century B.C. or even a Han date for this material.

We note that the chain-stitch embroidery illustrated in Figs. 129-132 and Pl. CXVIII in Rudenko also shows a close relation to Ch‘u decoration as seen in lacquer.

[39] *Ch‘u wen-wu Chou-lan T‘u-lu Hsu* (A Pictorial Record of Historical Objects from Ch‘u), catalogue of exhibition, June-November, 1953, Peking, October 1954

[40] Bernhard Karlgren, *Huai and Han,* in the Bulletin of the Museum of Far Eastern Antiquities, No. 13, Stockholm, 1941, p. 71

[41] Nos. 14514 and 14310 in the tables in *Izvestiya Rossiskoi Akademi Material'noi Kul'tury* (Bulletin of the Russian Academy for Material Culture), Vol. XI, parts 7-9, 1932; translated by Eugenia Tolmachoff and republished in part in the Bulletin of the Needle and Bobbin Club, Vol. 20, 1936, Nos. 1 & 2, p. 25-37

[42] The design is planned and the warp threaded and tied up in the loom before weaving in such a way that vertical repeats are produced in the actual weaving by using a given order of shedding for the first half of the repeat and an exact reversal for the second. When woven by this method, vertically symmetrical motives, such as the complete lozenges and half-lozenges with central axes in the horizontal or weft direction which we see in the Noin-ula silk, may be completed by a reversal of the order of shedding. Unsymmetrical forms like the volute-and-triangle and the cock must be completed before the order of shedding is reversed; after it is reversed, they are repeated upside-down. This method of weaving repeat patterns in which geometric and naturalistic motives were combined, which is represented in a large number of textiles surviving from Han times, was apparently an expedient adopted to produce quantity with a minimum of design effort, rather than quality in design and weaving. It may, as Andrews has suggested, have been the result of the heavy demand for export silks at this time.

[43] Warp-patterned silk preserved in the Hermitage Museum in Leningrad; illustrated in: *Ausstellung Chinesischer Kunst,* Berlin, Gesellschaft für ostasiatische Kunst, 1929, Fig. 1231

[44] Stein, *Innermost Asia,* Oxford, 1928; Vol. 3, Pl. XXXIV, L.C. 08, L.C. 07-a, L.C. iii. 011

[45] Stein, *op. cit.;* Pl. XXXV, L.C. 031.b; Pl. XXVI, L.C. 04.b

[46] The zigzag edging of the lozenge framework in one of the Cooper Union Museum silks, while seen in some Han silks (Stein, *Innermost Asia,* III, Pl. XLII, L.C. i. 06, 7, 7a; Pl. XXXIV, L.C. 07.a; Pl. XXXVI, L.C. iii. 04.b) and possibly suggesting the saw-tooth borders of Karlgren's "L" mirror group of Han date, relates to

a good deal of other material of Late Eastern Chou date. As Karlgren says, "The absence of the sawteeth pattern on Huai mirrors does not, however, mean that the motif was unknown in pre-Han time. On the contrary, though not belonging to the grammar of the mirrors, it is exceedingly common in Huai art . . . a bell in the Sumitomo collection . . . the flat *Hu* in the Pilster collection . . . a *Ting* tripod from Sin-Cheng . . . the famous Sin-Cheng gold sheet. The saw-teeth pattern is such a simple and commonplace motive in all decorative art that it is almost ubiquitous." (Karlgren, *The Date of the Early Dong-s'on Culture,* in the Bulletin of the Museum of Far Eastern Antiquities, No. 14, Stockholm, 1942, p. 10).

[47] Fred Henry Andrews, *Ancient Chinese Figured Silks excavated by Sir Aurel Stein,* in the Burlington Magazine, Vol. 37, no. 210, Sept., 1920, Fig. 11, p. 149

[48] Vivi Sylwan, *Investigation of Silk from Edsen-gol and Lop-nor,* Stockholm, 1949, p. 123-125, and Pl. 18-A

[49] Quoted in Bernhard Karlgren, *Some Fecundity Symbols in Ancient China,* in the Bulletin for the Museum for Far Eastern Antiquities, No. 2, Stockholm, 1930, p. 23

[50] Can it be purely accidental that the lozenge-patterned silk presents a haunting similarity to the geometrical organization of patterning found in the carpets still woven, the garments still embroidered, in Turkestan and the Caucausus? In its design, and even in individual motives, are to be found a persistence of memory that might conceivably refer back to a remote common ancestry not yet traced by today's historians.

[51] Se-ma Ts'ien, *op. cit.,* III, p. 401; here translated from the French of Chavannes

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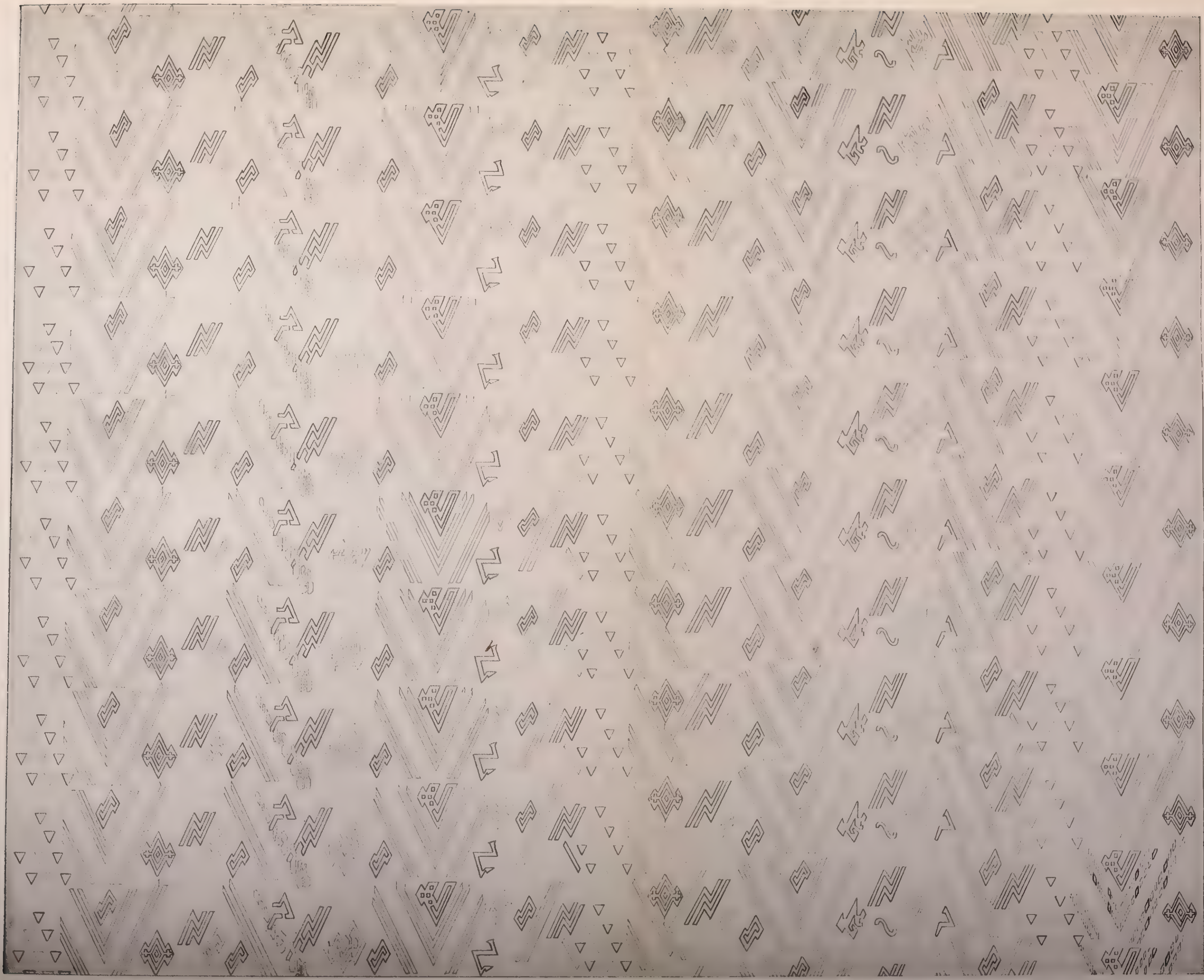
Figure 13. Design of warp-patterned silk of bonnet, giving the full sequence of pattern motives in the available width of 33 cm. ($12\frac{15}{16}$ inches). The weaver's "broken line" rendering of some of the chevrons and diagonals is represented in detail. The warp direction is vertical, in the direction of the pattern repeat. — Drawn by Miss Alice S. Erskine and Mrs. Kathryn Dauber.



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